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PERSONAL.

Mr. A. D. Marble has been appointed City Engineer of Lawrence, Mass.

Mr. L. M. Dalgarn has been appointed City Engineer of Natchez, Miss.

Maj. W. L. Alexander has been appointed Superintendent of the water-works and electric light plant of Union City, Tenn.

Mr. Godfrey P. Farley, First Assistant Engineer of the Dock Department of New York city, has resigned. He has been with the department for about nine years.

Mr. Charles R. De Freest, who was recently appointed to take charge of the new Department of Grade Crossings by the New York State Board of Railroad Commissioners, has resigned.

Mr. W. C. Halliday, Assistant Engineer of the Eastern Division of the Lake Shore & Michigan Southern Ry., with offices at Dunkirk, N. Y., has resigned to accept a position in Tacoma, Wash.

Hon. W. L. Hess, ex-Mayor of Ottawa, Ill., has been appointed Receiver of the Ottawa Electric Street Car Co., of that city. Mr. W. F. Ellis, of Boston, Mass., is the President of the company.

Gen. Charles H. T. Collis, formerly Commissioner of Public Works, of New York city, will sail this week for the Mediterranean ports and will take a trip up the Nile. His family will accompany him.

Mr. George W. Birdsall, for many years Chief Engineer of the Croton Aqueduct, has been made Chief Engineer of the Department of Water Supply, for Greater New York, at a salary of $7,000 per year.

Mr. Seaton M. Scott, M. Am. Soc. M. E., late Mechanical Engineer of the Kelly & Jones Co., Greensburg, Pa., has opened an office at 123 Liberty St., New York city, as a consulting mechanical engineer.

Mr. Charles H. Duell, of Syracuse, N. Y., has been appointed Commissioner of Patents to fill the vacancy caused by the death of Maj. Benjamin Butterworth, which was announced in our last issue.

Mr. Edward Henry Keating, M. Am. Soc. C. E., City Engineer of Toronto, Ont., has resigned to accept the position of General Manager of the Toronto Ry. Co. He has been Toronto's City Engineer for the past six years.

Mr. Robert C. Fenton, whose appointment as City Engineer of Willimantic, Conn., was noted in our last issue, has not yet had his appointment ratified by the Board of Councilmen, the Board of Aldermen having made the appointment subject to the former board's ratification.

Gen. Russell M. Thayer, M. Am. Soc. C. E., Chief Engineer and Superintendent of Fairmount Park, Philadelphia, Pa., since September, 1875, has resigned to accept a position with the United Gas Improvement Co., of that city. He is a graduate of West Point, and was at one time in the service of the Pennsylvania R. R.

Mr. Samuel Parsons, Jr., Superintendent of Parks, of New York city, has resigned, owing to the abolishing of the office by order of Mr. George C. Clausen, President of the Park Board and Commissioner of Parks of the Boroughs of Manhattan and Richmond. Mr. Niles J. Rose, as Landscape Gardener, and Mr. Patrick St. John, as General Foreman, will discharge the duties formerly pertaining to the abolished position.

Mr. J. C. Stuart, Superintendent of the Galena Division of the Chicago & Northwestern Ry., with office at Chicago, Ill., has been appointed General Superintendent of the Chicago, St. Paul, Minneapolis & Omaha Ry. Mr. W. E. Morse, Assistant Superintendent of the Madison Division, has been appointed to succeed him. Mr. Morse will be succeeded by Mr. Henry W. Battin, Division Engineer of the Madison Division, with headquarters at Baraboo, Wis.

Mr. William Clark Hawkins, Jun. M. Am. Soc. C. E., Receiver and Superintendent for the Concord Land & Water Power Co., Concord, N. H., has resigned to accept the position of Managing Engineer of the Columbia Water Power Co., Columbia, S. C., and Boston, Mass. He is a graduate of the Stevens Institute of Technology, Hoboken, N. J., and was formerly an Assistant Engineer on the Third Ave. cable road in New York city. Mr. George Burns Lander, formerly State Electrical Inspector for the New Hampshire Board of Fire Underwriters, has been appointed Superintendent to succeed him. He is a graduate of the Massachusetts Institute of Technology, Boston, Mass.

Mr. A. G. Morton was reported in our last issue to have been appointed an Assistant Division Engineer of the Baltimore & Ohio Southwestern Ry. We are informed by an official of this railway that the report is incorrect, and that since Jan. 1, Messrs. E. Stimpson and A. G. Norton, Assistant Engineers at headquarters, have been assigned to be Assistant Engineers in the Division Engineers' office at Chillicothe, O., and Washington, Ind., respectively.

The new East River Commission, named by Mayor Van Wyck to succeed the former commission, is made up as follows: Mr. Lewis Nixon, President; Mr. James A. Boyle, Vice-President; Mr. Smith E. Lane, Secretary; Mr. Julian D. Fairchild, Treasurer, and Messrs. John W. Weber and Thomas S. Moore, Commissioners. Mr. Nixon is the well known shipbuilder; Messrs. Lane and Moore are lawyers; Mr. Fairchild is the President of the Kings County Trust Co.; Mr. Weber is a brewer and Mr. Boyle is a Tammany Hall leader. The salary of the Commissioners is $3,000 per annum. The old Commission, which has been summarily removed, was made up as follows: Messrs. Andrew D. Baird, James A. Sperry, Henry Batterman, Richard Deeves, F. B. Thurber and Salem H. Wales.

OBITUARY.

Mr. J. H. Kenyon, mechanical engineer, of Plainfield, N. J., died Jan. 20.

M. Ernest Bazin, the inventor of the Bazin roller steamer, died in Paris, France, Jan. 21, aged 42.

Mr. Francis Sellers, of the firm of Lindsay, Owens & Co., iron manufacturers, of Pittsburg, Pa., died Jan. 20, aged 81.

Mr. D. G. Charles, civil engineer and journalist, of Chattanooga, Tenn., died at St. Luke's Hospital, New York city, Jan. 19, aged 48.

Maj. John Hancock, for 29 years Manager of the Black Diamond Steel Works of Messrs. Park Brothers & Co., died Jan. 10 at his home, Hampton, near De Haven, Pa., aged 72. He retired from business about five years ago.

Mr. John Laird, of the firm of Laird Brothers, shipbuilders, of Birkenhead, England, died Jan. 25, aged 69. It was this firm that built the famous frigate "Alabama" in 1862 for the Confederate Government. The steamship "Columbia" of the Hamburg-American Line was also built at their yards.

Mr. William L. Elseffer, civil engineer, of New York city, died recently. He was engaged in surveys for the construction of the Hudson River R. R. in the forties and later in canal construction. He made a report in 1887 to the U. S. Senate Commission on the Pacific railways and more recently was engaged on the Mississippi River irrigation problems.

Mr. Eugene R. Leland, Secretary and Treasurer of the Cincinnati Northern R. R., of New York city, died Jan 20, aged 68. At one time he was interested in the "Popular Science Monthly." In 1878 he became associated with the Richmond & Allegheny R. R. and soon after formed business connection with the Hon. Calvin S. Brice, which continued until the time of his death.

Mr. Rudolph Boericke, M. Am. Inst. M. E., of the firm of Stein & Boericke, mechanical engineers, of Philadelphia, Pa., whose death occurred Dec. 25, as noted in our last issue, was drowned while boating with his brother. He was 33 years of age, and was a graduate of the University of Pennsylvania, Philadelphia, Pa. He was a member of the Engineers' Club of Philadelphia and of the Franklin Institute.

Mr. James Lillis, railway contractor and capitalist, of Kansas City, Mo., died Jan. 17, aged 61. He built large portions of the Burlington & Missouri River R. R., the Kansas City, Memphis & Mobile R. R., the Missouri Pacific Ry., the Lexington & Southern Ry., the Chicago & Alton R. R. and the Atchison, Topeka & Santa Fe Ry., besides the Kansas City Elevated Ry. In 1880 he went to Kansas City, Mo., and built the greater part of the cable railway system of that city, being associated with Messrs. Corrigan and McGowan, contractors and officers of these lines.

Mr. John A. Gano, President of the Atlas Copper Mining Co. and Vice-President of the Canal Elevator Co., of Cincinnati, O., died Jan. 15, aged 71. Early in the sixties he became the financial editor of the Cincinnati "Commercial," and from 1860 to 1867 was the Secretary of the Chamber of Commerce. In 1867 he was elected President of this body and held it for three consecutive terms. He was interested at different times in the Westinghouse Air-Brake Co., the Card Electric Motor Co. and the Economy Fuel & Steam Heating Co., besides other enterprises.

Col. Charles F. Hopkins, civil engineer and surveyor, of Jacksonville, Fla., died at Springfield, Fla., Jan. 17. He was born Dec. 1, 1824, at Belleview, Ga., and graduated from the United States Naval Academy, Annapolis, Md. After several years in the service of the U. S. Navy he resigned and began the practice of a civil engineer and surveyor at St. Augustine, Fla. During the Civil War he served with the Confederate Army and rose to the rank of Colonel. After the war he again devoted himself to his profession and at the time of his death was County Surveyor of Duval County.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

ILLINOIS SOCIETY OF ENGINEERS AND SURVEYORS.
Jan. 25 to 28. Annual meeting, at Peoria, Ill. Secy., Jacob A. Harman, Peoria, Ill.

ENGINEERS' CLUB OF ST. LOUIS.
Feb. 2. Secy., Richard McCulloch, St. Louis, Mo.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
Feb. 2. Secy., C. W. Hunt, 220 West 57th St., New York city.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
Feb. 3. Secy., C. H. McLeod, 112 Mansfield St., Montreal, Canada.

BROOKLYN ENGINEERS' CLUB.
Feb. 3. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
Feb. 4. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

CHICAGO ELECTRICAL ASSOCIATION.
Feb. 4. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

THE ENGINEERS' CLUB OF PHILADELPHIA.
Feb. 5. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
Feb. 7. Secy., C. L. Annan, City Engineers' Office, St. Paul, Minn.

ENGINEERS' SOCIETY OF WESTERN NEW YORK.
Feb. 7. Secy., H. J. March, Library Bldg., Buffalo, N. Y.

DENVER SOCIETY OF CIVIL ENGINEERS.
Feb. 8. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Col.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Feb. 8. Secy., Wm. H. Searles, Case Library Bldg., Cleveland O.

NORTHWEST RAILWAY CLUB.
Feb. 8. Secy., T. A. Fogue, Soo Line, Minneapolis, Minn.

WISCONSIN POLYTECHNIC SOCIETY.
Feb. 8. Secy., W. K. Means, Loan & Trust Bldg., Milwaukee, Wis.

NEW ENGLAND RAILROAD CLUB.
Feb. 9. Secy., Edward L. Jones, P. O. Box 1158, Boston, Mass.

FRANKLIN INSTITUTE.
Feb. 9. "The Practical Aspect of Present Methods of Testing Iron and Steel," Paul Kreuzpointner. Feb. 24. "The Telephone Exchange," Herbert L. Webb. Secy., Wm. H. Wahl, 15 S. Seventh St., Philadelphia, Pa.

ENGINEERING ASSOCIATION OF THE SOUTH.
Feb. 10. Secy., C. B. Wilson, Nashville, Tenn.

ST. LOUIS RAILWAY CLUB.
Feb. 11. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

MONTANA SOCIETY OF ENGINEERS.
Feb. 12. Secy., Albert S. Hovey, Helena, Mont.

INDIANAPOLIS ENGINEERING CLUB.
Feb. 12. Secy., Edson F. Folsom, Indianapolis, Ind.

ENGINEERS' CLUB OF KANSAS CITY.
Feb. 14. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
Feb. 15. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

WESTERN RAILWAY CLUB.
Feb. 15. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

AMERICAN INSTITUTE OF MINING ENGINEERS.
Feb. 15. Annual meeting Atlantic City, N. J. Secy., R. W. Raymond, 13 Burling Slip, New York city.

THE PACIFIC COAST TRANSMISSION ASSOCIATION.
Feb. 15-18. Secy., Robt. McF. Doble, Blue Lake Water Co., Blue Lake, Humbolt Co., Cal.

BOSTON SOCIETY OF CIVIL ENGINEERS.
Feb. 16. Secy., S. E. Tinkham, City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION.
Feb. 16. Secy., A. Sorge, Jr., 1020 Monadnock Block, Chicago, Ill.

ENGINEERS' AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.
Feb. 16. Secy., Frank H. Olmsted, Los Angeles, Cal.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
Feb. 17. Secy., F. A. Charpiot, Macon, Ga.

ENGINEERS' CLUB OF CINCINNATI.
Feb. 17. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.

NEW YORK RAILROAD CLUB.
Feb. 17. Secy., W. W. Wheatly, 168 Montague St., Brooklyn, N. Y.

ENGINEERS' CLUB OF COLUMBUS.
Feb. 19. Secy., M. S. Hopkins, 14½ N. High St., Columbus, O.

TECHNICAL CLUB OF OMAHA.
Feb. 21. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' CLUB OF MINNEAPOLIS.
Feb. 21. Secy., Elbert Nexsen, 1620 S. E. 4th St., Minneapolis, Minn.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.
Feb. 23. Secy., R. W. Pope, 26 Cortlandt St., New York city.

THE IOWA BRICK AND TILE ASSOCIATION.—The annual convention of this society was held Jan. 12-13, at Des Moines, Ia. Several papers pertaining to brick and tile making and use, were read. The election of officers for 1898 resulted as follows: Pres., C. J. Holman, Sergeants Bluff; Vice-President, W. W. Lewis, Williamsburg; Secy., Robert Goodwin, Redfield; Treas., F. A. Stephenson, Webster City.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.—The annual meeting of this club was held Jan. 17, at the Norton Bldg., Louisville, Ky. The following officers were elected; Pres., Webster Gazlay; Vice-President, Wm. B. Blake; Secy., Jas. K. Zollinger; Directors, Henry Vogt, J. P. Claybrook, Marshall Morris, Granville W. Shaw, Chas. Hermany and J. C. Murphy.

Jas. K. Zollinger, Secy.

NATIONAL IRON ROOFERS' ASSOCIATION.—The annual convention of this association in Cincinnati, O., closed Jan. 19 with the election of the following officers: Pres., G. E. Needham, Cleveland; Vice-President, E. E. Souther, St. Louis, Mo.; Secy. and Treas., George M. Verity, Cincinnati, O. Executive Committee, Alexander Glass, Wheeling, Va.; E. L. Langebach, Canton, O.; J. G. Ballette, Piqua, O.; J. E. Annis, Chattanooga, Tenn.; A. L. Andrews, Cincinnati, O.; H. C. Hornbrook, Cambridge, O.

ENGINEERING ASSOCIATION OF THE SOUTH.—The January meeting of this association was held in Nashville, Tenn., Jan. 13. The Secretary announced that it was now possible to publish the proceedings of the association, but after some discussion it was decided to postpone the printing until later. The paper of the evening, "Improved Methods of Coke Making," was read by Dr. Wm. L. Dudley, of Vanderbilt University, who directed his remarks chiefly to the Semet-Solvay process, whereby the bi-products, ammonia, coal tar and fuel gas are saved. (An abstract of the paper is published in another column.) C. B. Wilson, Secy.

ENGINEERS' CLUB OF ST. LOUIS.—The 465th meeting of this club was held Jan. 19. Mr. S. Bent Russell read a paper entitled "Experiments With a New Machine for Testing Materials by Impact." (Eng. News, Jan. 13, 1898.) The paper opened with a discussion of the subject of resilience. A description was given of the usual methods of testing materials by impact, and drawings of the new machine were exhibited as well as the method by which the machine had been calibrated and tested. Tables of tests on different materials, drawings, samples of broken specimens, and cutters used in forming test bars were exhibited.

Richard McCulloch, Secy.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.—At the annual meeting held in Pittsburg, Pa., Jan. 18, the retiring president, Mr. Emil Swensson, spoke on "The Economic Function of the Engineering Profession and the Lessons Taught by the Late Business Depression." The committee on good roads presented a report which called the roads in Pennsylvania very poor, and gave as the reason the system of road repairs, which made no provision for permanent repairs. The election of officers for the ensuing year resulted as follows: Pres., C. S. Davidson; Vice-President, W. A. Bole; Secy., R. A. Fessenden; Treas., A. E. Frost; Directors, C. F. Scott and Gustave Kaufmann.

THE ENGINEERS' CLUB OF PHILADELPHIA.—The 19th annual meeting was held Jan. 15. The membership, according to the Board of Directors, is 406 active, 19 associate, and 6 juniors. The Treasurer reported a cash balance of $630. The retiring president, Mr. Joseph T. Richards, delivered an address in which he advocated the formation of a federation of Philadelphia engineering societies and the erection of a society building. He mentioned various engineering achivements, such as the high buildings now becoming so common. The officers selected for 1898 are: Pres., L. Y. Schermerhorn; Vice-President, William C. L. Eglin; Secy., L. F. Rondinella; Treas., George T. Gwilliam; Directors, Richard L. Humphrey, C. H. Ott and Edwin F. Smith.

WESTERN FOUNDRYMEN'S ASSOCIATION.—At the meeting on Jan. 19 there was but a small attendance to listen to an exceptionally valuable and interesting paper by Major Malcom McDowell on "The Value of Metalloids in Cast Iron." This paper discussed the effects of various proportions of carbon, silican, sulphur, phosphorus and manganese, in producing castings of different grades.

In view of the importance of the subject and the fact that advance copies of the paper had only been distributed a few days before the meeting, it was voted that the subject should be made a special order of discussion at the next meeting. A large number of invitations will be issued to foundrymen (members and others) to attend this meeting and take part in the discussion.

IOWA ENGINEERING SOCIETY.—The 10th annual convention of this society was held Jan. 19 at Cedar Rapids, Ia. The officers selected for 1898 are: Pres., C. P. Chase, Clinton; Vice-President, B. Schreiner, Des Moines; Secy.-Treas., E. P. Boynton, Cedar Rapids; Directors, G. Davis, Cedar Rapids, and J. G. Ratcliff, Waukon.

After the regular business and the reading of the papers (Eng. News, Jan. 20, 1898) a banquet was held at which the following toasts were enjoyed: "Chief Engineer," President C. R. Allen; "Law and the Profession," Wm. Steyh; "Damming the Magnetic Current—The Engineer's Vocabulary," J. D. Wardle; "The Engineer and His Future," L. Higgins; "Old Landmarks—A Prophesy," L. H. Stone; "The Transit of Venus," C. P. Chase; "Specifications for an Engineer," E. P. Boynton, "Bricks Without Straws," Prof. A. V. Sims.

WEST VIRGINIA SOCIETY OF CIVIL ENGINEERS AND ARCHITECTS.—The 3d annual meeting of this society, as outlined by the committee on arrangements, occurs at Morgantown, W. Va., Jan. 26-27, as already noted in this column. The program includes the following papers: "Modern Trend of Engineering Education," John J. Johnson, Prof. Civil Engineering, W. Va. University; "Technical Education for Engineers," Elmer Leach, Representative of the W. Va. Eng. Soc. of the W. Va. University; "History and Development of the Steam Engine," F. L. Emory, Prof. Mechanics, W. Va. University; "Public Road Improvement," J. F. Burley, Moundsville, W. Va.; "City Comforts in Rural Homes," Thos. E. Hodges, Prof. Physics, W.Va. University; "Importance of Geology in Engineering Problems," I. C. White, State Geologist; "The Coal Mining Industries of Our State," J. W. Paul, Chief Mine Inspector; "Change of the Iron Productions of the Country," S. B. Brown, Prof. Geology, W. Va. University; "Professional Statics and Ethics," C. R. Jones, Assistant Prof. Mechanics, W. Va. University.

LOUISIANA ENGINEERING SOCIETY.—The first regular meeting of this society was held at the New Orleans City Hall, Jan. 15, to adopt a constitution and by-laws. The society was organized Jan. 8, 1898, for professional improvement and the encouragement of social intercourse among engineers and men of practical science, and the advancement of engineering in and about its headquarters, New Orleans, La. The membership includes civil, military, naval, mechanical, mining, electrical engineers, surveyors, architects and marine architects. Three classes of members are provided for, members, associate members and juniors. A high standard for admission is required and every effort will be made to make the society a success. The following officers were elected for the ensuing year. Pres., Sidney F. Lewis, Assistant State Engineer; Vice-President, C. H. Chamberlin, Texas & Pacific R. R.; Secy., J. F. Coleman, Assistant City Engineer; Treas., Alf. F. Theard, Chief Draughtsman of the Drainage Commission; Directors, T. L. Raymond, Assistant Engineer of the Drainage Board; A. C. Bell, City Engineer; F. T. Llewellyn, M. E.

CENTRAL RAILWAY CLUB.—The annual meeting of the club was held at the Hotel Iroquois, Buffalo, N. Y., Jan. 21, with about 60 members and guests in attendance. At the business session a number of new members were elected and the report of the Secretary-Treasurer, Mr. H. D. Vought, was presented. This showed the financial affairs of the club in good condition, there being a cash balance of $781 on hand. After the business session the committee on "Springs for Freight Car Trucks" presented its report, and the subjects of "Journal Bearing Keys" and the "Height of Cars" were discussed briefly. The annual election which followed resulted in the election of the following officers to serve during 1898: Pres., J. S. Lentz; Vice-Pres., E. A. Miller; Secy.-Treas., H. D. Vought; Executive Committee, John Mackenzie, F. B. Griffith, J. R. Petrie, H. C. McCarty.

Previous to the meeting a large number of the members present witnessed a series of car wheel and car axle tests at the shops of the P. H. Griffin Machine Works. These tests are described elsewhere in this issue. A number of the members also took advantage of the invitation of the Niles Tool Works Co., to visit the company's shops at Hamilton, O., special cars and transportation from Buffalo and return being provided for that purpose. This excursion started at 11.30 p. m., immediately after the banquet and "smoker," which closed the day's proceedings.

AMERICAN INSTITUTE OF MINING ENGINEERS.—The 28th annual meeting of the Institute is called for Feb. 15 at Atlantic City, N. J. The Secretary, Dr. R. W. Raymond, has issued a partial list of papers to be read during the convention as follows: "Compressed Air Power Transmission at Kellogg, Idaho," F. W. Bradley; "Camp Floyd Gold Deposits, Mercur, Utah," E. A. Wall; "A New Form of Ingot-Mold for Casting Brass or Bronze Ingots, with Remarks on the General Form of Ingots," Edwin S. Sperry; "Emery, Chrome, Ore and Other Minerals in Villaget of Aiden, Asia Minor," W. F. A. Thomae; "The Bildt Automatic Feed-Device for Gas Producers," C. W. Bildt; "Notes on the Caucasus," Dr. Persifor Frazer; "Apparatus for Removing the Sand from the Waste-Water of Ore Washers," E. Johnson, Jr.; "The Influence of Antimony on the Cold-Shortness of Brass," Erwin S. Sperry; "The Ultimate and Rational Analysis of Clays and their Relative Value," Heinrich Ries; "Mining Districts of Columbia," H. G. Granger and E. B. Treville; "A New Departure in Breaker Building at Cranberry Coal-Mine, Hazleton, Pa." W. S. Ayres; "A Study of the Elimination of Impurities in the Reverberatory and Convertor Processes of Copper Production from Copper-Matte," Edward Keller; "Note on Limonite Pseudomorphs from Dutch Guiana," R. W. Raymond; "The Manganese Ore Industry of Caucasus," Frank Drake; "Mining Timber and Forest Reserves," Gifford Pinchot; "Some Peculiar Occurrences of Gold Ore in Montana," W. H. Weed.

NORTH WESTERN ELECTRICAL ASSOCIATION.—The 6th annual convention of this association was held at the Hotel Pfister, Milwaukee, Wis., Jan. 19. Various reports were listened to and the usual routine business transacted, after which the president, Mr. H. C. Higgins, of Marinette, Wis., read his address. In the course of his remarks he touched briefly upon the municipal lighting question and warned his listeners against "the political schemer who is always working for the dear people." Referring to the gas business and its prospects, Mr. Higgins said that like the poor, it would always be with us, and further, that contrary to early expectations, gas securities and interests have steadily increased in value, notwithstanding the rapid growth of electric lighting.

The Secretary stated that, according to instructions, he had been corresponding with the National Electric Light Association concerning a possible joint action of the two associations on a municipal ownership report to the United States Bureau of Statistics.

The nominating committee submitted the following list of officers, who were unanimously elected: President, F. A. Copeland, La Crosse, Wis.; First Vice-President, James R. Dee, Houghton, Mich.; Second Vice-President, P. H. Korst, Racine, Wis.; Secy. and Treas., Thomas R. Mercein, Milwaukee, Wis.; Directors, E. L. Debell, Sheboygan, Wis.; Geo. L. Thayer, Belle Plaine, Ia.; S. B. Livermore, Winona, Minn.

During the afternoon session Mr. John C. McMynn read an interesting paper on "The Practice of Theory," and Mr. Alexander Dow one on "Electric Lighting for Profit." Among the other papers read on the following day were "Long Distance Transmission and Transformers," Axel Ekstrom; "Present Efficiency of Incandescent Lamps," John E. Randall; "Physical and Chemical Properties of Volatile Oils in Boilers," W. H. Edgar; "Electricity in Municipal Engineering," Prof. R. B. Owens, and "Municipal Socialism," Fred De Land. A banquet was held in the evening.

WESTERN RAILWAY CLUB.—At the meeting on Jan. 18 the subjects for discussion included track and maintenance of way matters, the discussion being based upon three papers, as follows: "Data from Rail Tests," by A. Delano (C., B. & Q. R. R.); "Rails, Past and Present," by E. C. Potter, and "Notes on Railway Rails," by E. S. Russell Tratman (Associate Editor of Engineering News).

Mr. Hetzler (C., B. & Q. R. R.) thought Mr. Delano to be correct in his opinion that the motive power and engineering departments do not work together as they should. As to quality of rails, he thought it better for a railway to specify a drop test than to specify the chemical composition, thus giving a physical test, as for bridge, boiler and structural steel. Prof. Goss (Purdue University) did not think that much power was really lost by the deflection of track, a view which Mr. Rhodes (C., B. & Q. R. R.) combatted, referring to the great loads of engines and cars. Mr. Rhodes thought that motive power improvements had far outstripped track improvements, and that steps should be taken to bring the track into better relation with the rolling stock. Mr. Tratman thought that in discussing the wear of rails more consideration should be given to the treatment the rails receive, and he instanced cases where engine loads have been increased very considerably without any increase in the weight of rail. He did not think it was for an engineer to specify chemical composition unless he had more than a superficial knowledge of the chemistry of steel and the details of rail manufacture. The drop test, however, meets all practical requirements, except as to the war-resisting properties, for which he suggested certain abrasion tests.

As to the load which it is safe to impose upon rails, Mr. Camp ("Railway Review") doubted if light rails were actually unsafe under heavy locomotives, the trouble being that they wore too rapidly. Mr. Davis (B., C. R. & N. Ry.), however, disputed this view, and stated that on his road orders had been given against running certain heavy engines over a part of the line laid with 60 lb. rails. One member brought up the old subject of making the corner of the rail fit the flange of the wheel, and claimed that some roads using the Am. Soc. C. E. standard sections were having such trouble from sharp flanges as to induce them to change their rail sections. Other members, however, who had experience with the Am. Soc. C. E. sections, had had no trouble of this kind, and Mr. Tratman pointed out that even the Lehigh Valley R. R. had abandoned the wide corner and flaring head fitting the wheel flange.

This discussion being closed Prof. Goss brought up the subject of inducing graduates from the engineering schools to enter the roadway department. He thought more attention should be given to this matter. In the discussion on this subject it was pointed out that the Southern Pacific, Boston & Maine, Illinois Central, Erie and a few other roads are moving in this direction to a greater or lesser extent. Mr. Tratman thought that one reason why the graduates themselves had not entered this field was that the roadway department is very often considered by railway men as well as outsiders to be one for unskilled rather than skilled labor, and therefore does not seem to offer a very good prospect for the future. He considered, however, that a change in this sentiment was evident, as shown by the action of the roads mentioned.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work.	Place.	See Eng News.
Jan. 27.	Heating and ventilating,	Little Rock, Ark.	Jan. 13
Jan. 27.	Artesian well,	Fort Washington, Md.	Dec. 30
	Advertised, Eng. News, Dec. 30 to Jan. 20.		
Jan. 27.	Water bonds,	Chicago, O.	Jan. 27
Jan. 28.	Bridge planking,	Grand Rapids, Mich.	Jan. 27
Jan. 28.	Sewers,	Louisville, Ky.	Jan. 27
Jan. 28.	Tools, machinery, etc.,	Pittsburg, Pa.	Jan. 27
Jan. 28.	Bridge (100-ft. span),	Eugene, Ore.	Jan. 27
Jan. 28.	Collecting garbage, etc.,	Minneapolis, Minn.	Dec. 30
Jan. 28.	Water bonds ($21,000),	Franklin, Ky.	Jan. 13
Jan. 28.	Buildings,	Denver, Colo.	Jan. 13
Jan. 28.	Castings, hydrants, etc.,	St. Louis, Mo.	Jan. 20
Jan. 28.	Lift bridges (2),	Utica, N. Y.	Jan. 20
Jan. 28.	Lift bridge,	Syracuse, N. Y.	Jan. 20
Jan. 29.	Armor plant,	Washington, D. C.	Dec. 16
Jan. 29.	Brick and pipe sewers,	Pittsburg, Pa.	Jan. 27
Jan. 29.	Asylum building,	Versailles, N. Y.	Jan. 27
Jan. 31.	Temporary bridges,	Montreal, Que.	Jan. 27
Jan. 31.	Approaches,	New York, N. Y.	Jan. 27
Jan. 31.	School building,	New York, N. Y.	Jan. 27
Jan. 31.	Steel truss bridge,	Riverdale, Utah.	Jan. 27
Jan. 31.	Pile bridges (3),	Mount Vernon, Wash.	Jan. 27
Jan. 31.	Paving and curbing,	Houston, Tex.	Jan. 27
Jan. 31.	Granite block paving,	Macon, Ga.	Jan. 27
Jan. 31.	Pier and boom,	Mount Vernon, Wash.	Jan. 27
Jan. 31.	Water pumps, pipe, etc.,	Colton, Cal.	Jan. 27
Jan. 31.	Removing garbage, etc.,	Council Bluffs, Ia.	Jan. 27
Jan. 31.	Grading,	Toledo, O.	Dec. 30
Jan. 31.	Steel tow boat,	New Orleans, La.	Dec. 30
	Advertised, Eng. News, Dec. 30 to Jan. 20.		
Jan. 31.	Brick sewers,	Toledo, O.	Jan. 6
Jan. 31.	Paving, curbing, etc.,	Columbus, Ind.	Jan. 6
	Advertised, Engineering News, Jan. 6.		
Jan. 31.	Railway,	Cape of Good Hope, Africa.	Jan. 6
Jan. 31.	Sidewalk bonds,	College Hill, O.	Jan. 13
Jan. 31.	Paving Buffalo St.,	Houston, Tex.	Jan. 20
Jan. 31.	Port,	Buenos Ayres, Argentine.	Jan. 20
Feb. 1.	County bridges (3),	Laramie, Wyo.	Jan. 20
Feb. 1.	Water-works,	Summit, Miss.	Jan. 20
Feb. 1.	Dam (1,350 ft.),	Swansea, England	Jan. 20

Feb. 1. Water tunnel (14,310 ft.), Swansea, Eng. . . Jan. 20
Feb. 1. Hospital building, Allentown, Pa. . . . . Jan. 20
Feb. 1. Auditorium building, Lawrence, Kan. . . . . Jan. 13
Feb. 1. Macadamizing, Passaic, N. J. . . . . Dec. 30
Feb. 1. Power plant, Seattle, Wash. . . . . Dec. 30
Feb. 1. Court house, Indianola, Miss. . . . . Dec. 23
Feb. 1. Electric light plant, Spring Green, Wis. . . . . Jan. 6
Feb. 1. Church building, Clinton, Mass. . . . . Jan. 6
Feb. 1. Steel ferry steamers (2), Birkenhead, Eng. . . Jan. 6
Feb. 1. Removing garbage etc., Mount Vernon, N.Y. . . Jan. 27
Feb. 1. Care of streets, etc., Rochester, N. Y. . . . . Jan. 27
Feb. 1. Reservoir, Lancaster, O. . . . . Jan. 27
Feb. 1. Railway, South McAlester, Ind. Ter. . . . . Jan. 27
Feb. 1. Plumbing, etc., Chicago, Ill. . . . . Jan. 27
Feb. 1. Elevators (3), Milwaukee, Wis. . . . . Jan. 27
Feb. 2. Pipe sewers, Salem, O. . . . . Jan. 27
Feb. 2. Water pipe (10,000 tons), Cleveland, O. . . . . Jan. 13
Feb. 2. Sewers, Indianapolis, Ind. . . . . Jan. 20
Feb. 2. Iron bridge, Mankato, Minn. . . . . Jan. 20
Feb. 2. Water pipe, etc., Elmwood Place, O. . . . . Jan. 20
Feb. 2. Street sweeping machines (8), Omaha, Neb. Jan. 20
Feb. 3. Widening bridge, Washington, D. C. . . . . Jan. 6
Advertised, Engineering News, Jan. 6.
Feb. 3. Bridge foundations, Boston, Mass. . . . . Jan. 27
Advertised, Engineering News, Jan. 27.
Feb. 3. Arc dynamos (2), wiring, etc., Jersey City. . Jan. 27
Feb. 4. Brick paving (18,000 sq.yds.), Hazleton, Pa. . . Jan. 27
Advertised, Engineering News, Jan. 27.
Feb. 4. Pier work, New York, N. Y. . . . . Jan. 27
Feb. 4. School building, Chicago, Ill. . . . . Jan. 27
Feb. 5. Steel bridge, Cincinnati, O. . . . . Jan. 13
Feb. 5. Water-works, etc., Rapid City, S. Dak. . . . Jan. 13
Feb. 5. Sewerage system, etc., Rapid City, S. Dak. . . Jan. 13
Feb. 5. Water-works, Elkpoint, S. Dak. . . . . Jan. 6
Feb. 5. Sidewalk brick, Canton, O. . . . . Jan. 27
Feb. 7. Capitol building, Harrisburg, Pa. . . . . Jan. 27
Feb. 7. Brick and pipe sewers, Atlanta, Ga. . . . . Jan. 27
Feb. 7. Filling lots, Albany, N. Y. . . . . Jan. 27
Feb. 7. Cement sidewalks, Muncie, Ind. . . . . Jan. 13
Feb. 7. Grading, etc., North Stonington, R. I. . . . . Jan. 13
Feb. 7. Motor vans (garbage), Wolverhampton, Eng. Jan. 13
Feb. 8. Navy yard supplies, Mare Island, Cal. . . . . Jan. 20
Feb. 8. Hospital building, Willows, Cal. . . . . Jan. 20
Feb. 8. Capitol building, Helena, Mont. . . . . Jan. 20
Feb. 8. Hospital building, Stockton, Cal. . . . . Jan. 20
Feb. 8. Hospital building, Punxsutawney, Pa. . . . . Jan. 27
Feb. 8. Light and water bonds, Ortonville, Minn. . . Jan. 27
Feb. 9. Electric light plant, Norristown, Pa. . . . . Jan. 27
Feb. 9. Tunnel, San Diego, Cal. . . . . Jan. 27
Feb. 9. Jetties and shore protection, Cleveland, O. . . Jan. 27
Advertised, Engineering News, Jan. 27.
Feb. 9. Macadamizing (5,320 ft.), Burlington, Vt. . . Jan. 20
Feb. 10. Electric light plant, Gallatin, Mo. . . . . Jan. 20
Advertised, Engineering News, Jan. 20.
Feb. 10. Water-works, Gallatin, Mo. . . . . Jan. 20
Advertised, Engineering News, Jan. 20.
Feb. 10. Tower, Savannah, Ga. . . . . Jan. 20
Feb. 10. Lock, dam, etc., Yamhill River, Ore. . . . . Jan. 6
Advertised, Eng. News, Jan. 6 to 27.
Feb. 10. Library, Pt. Elizabeth, Cape Good Hope. . Nov. 25
Feb. 10. Parkway, Buffalo, N. Y. . . . . Jan. 27
Feb. 11. College buildings, Missoula, Mont. . . . . Jan. 20
Feb. 12. Sewers, Norwood, O. . . . . Jan. 27
Feb. 12. Macadamizing, etc., Norwood, O. . . . . Jan. 27
Feb. 14. Garbage disposal plant, La Fayette, Ind. . . Jan. 20
Advertised, Eng. News, Jan. 20 and 27.
Feb. 15. Hire of dredging plant, Mobile, Ala. . . . . Jan. 20
Advertised, Eng. News, Jan. 20 to Feb. 10.
Feb. 15. Shore protection, etc., Ft. Morgan, Ala. . . . Jan. 20
Advertised, Eng. News, Jan. 20 to Feb. 10.
Feb. 15. Trunk sewer, Jersey City, N. J. . . . . Dec. 23
Feb. 15. Filtration plant, Albany, N. Y. . . . . Jan. 6
Advertised, Eng. News, Jan. 6 to 27.
Feb. 15. Macadamizing, etc., Mount Vernon, N. Y. . Jan. 27
Feb. 16. County bridges, York, Neb. . . . . Jan. 20
Feb. 18. Post office building, South Omaha, Neb. . . Jan. 27
Advertised, Eng. News, Jan. 27 and Feb. 3.
Feb. 21. Vault, etc., Halletsville, Tex. . . . . Dec. 23
Feb. 21. Extending pier, Margaree, N. S. . . . . Jan. 13
Feb. 21. Steel tow-boat, Memphis, Tenn. . . . . Jan. 27
Feb. 23. Laying water pipe, etc., Westfield, Mass. . . Jan. 27
Advertised, Engineering News, Jan. 27.
Feb. 23. Water pump (3,000,000 galls.), Erie, Pa. . . . Jan. 27
Advertised, Engineering News, Jan. 27.
Feb. 23. Water supply, Jersey City, N. J. . . . . Jan. 13
Feb. 24. Water pipe, Fort Harrison, Mont. . . . . Jan. 27
Feb. 28. Harbor work, Pernambuco, Brazil. . . . . Jan. 13
Feb. 26. Purchase l't and water plant, Brunswick, Ga. . Jan. 20
Mar. 1. Railway, Henrietta, Tex. . . . . Jan. 13
Mar. 1. Church building, Melrose, Minn. . . . . Jan. 27
Mar. 7. School bonds ($90,000), Toledo, O. . . . . Jan. 20
Mar. 7. Refitting vault, Waukegan, Ill. . . . . Jan. 20
Mar. 8. Jail building, Madera, Cal. . . . . Jan. 20
Apr. 4. Wharf, franchise, Summerland, Cal. . . . . Jan. 27
Apr. 30. Town hall, Singapore, S. S. . . . . Jan. 13
May 1. Plans for sewage disposal, Belper, Eng. . . . . Dec. 16
July 1. Water power, Madras, India. . . . . Oct. 28
No date. Church building, Whitensville, Mass. . . . . Jan. 27

RAILWAYS.

AFRICA.—Press reports state that the French government has begun the construction of a railway from Djibouti, the principal seaport of the French Somali protectorate in East Africa, to the city of Harar, in Abyssinia. The line has been surveyed between the two points, which are about 300 kilometres (186 miles) apart, and work has actually commenced at Djibouti and several other points on the line. It is intended to build only a narrow gage road at the start, the proposed gage between the rails being 1 metre and then, if the road proves a success, a broad gage may be substituted. A company of capitalists, whose office is at 5 Rue Scribe, Paris, is said to be at the head of the enterprise, and their secretary and general manager is C. Havard, of Djibouti.

ALASKA & NORTHWESTERN.—A bill for the granting of the right of way for a railway to be built by this company from Pyramid Harbor, on the Linn Canal, through to Chilkat Pass, has been introduced in Congress.

ASTORIA & COLUMBIA RIVER.—Reports state that most of the grading has been completed on this proposed railway from Seaside to Goble, Ore., via Gearhart, Warren, Astoria, Beaver, Mayger and Rainier, a distance of 78 miles. About 25 miles of track are also said to have been laid. Pres., A. B. Hammond, Missoula, Mont.; Ch. Engr., T. H. Curtis, Astoria, Ore.

CALIFORNIA EASTERN.—An extension of this line, according to reports, will be built from Manvel, Cal., to Good Springs, Nev., a distance of 50 miles. R. S. Selbert, Secy. and Gen. Mgr., Los Angeles, Cal.

CENTRAL WASHINGTON.—Press reports state that this railway has been sold at Spokane, Wash., under foreclosure and that it was bid in by Attorney Thomas Shepherd, of Seattle, representing the bondholders, for $100,000. The line extends from Cheney to Coulee City in the Grand Coulee, west of Spokane, 108 miles. C. P. Chamberlain, Receiver and Gen. Mgr., Spokane.

CHOCTAW, OKLAHOMA & GULF.—Bids are asked until Feb. 1 for the graduation, masonry, pile and framed structures, etc., for an extension of this railway from Wister, Ind. Ter., to a junction with the Kansas City, Pittsburg & Gulf R. R., a distance of 6½ miles. Engr., F. A. Moliter, South McAlester, Ind. Ter.

COLUMBUS NORTHWESTERN.—W. B. Eells, Mount Gilead, O., informs us that track laying on this new line has commenced at its junction with the Ohio Southern Ry. About 11 miles of grading and bridging eastward are ready for track laying, and the 10 miles intervening to reach Bellefontaine will probably be finished immediately, so as not to delay the track laying. The Ferguson Contracting Co., 69 Wall St., New York, are the contractors. J. J. Adams, Gen. Mgr., Lima, O.; A. Mitchell, Ch. Engr., Majestic Bldg., Detroit, Mich.

DENTON & CAMBRIDGE.—This company will soon be incorporated in Maryland to construct a railway between Denton and Cambridge, Md., a distance of about 30 miles, which will serve as a feeder to the Queen Anne's R. R. Among those interested are B. G. Stevens, W. B. Nuttle, Williston, Md.; H. T. Nuttle, Andersontown, Md.; James B. Wright, H. B. Messenger, Federalsburg, Md.; Emory S. Turpin, Greensboro, Md.; Edward W. Liden, Smithville, Md.; Thos. W. Jones, Pres., Ridgely, Md.; Wilber Emory, Baltimore, Md.; John H. Vangesee, Henry L. Lewis and M. Bates Stephens, of Denton, Md.

ELMWOOD, ANDERSON & LAPEL.—This company was incorporated in Indiana, Jan. 12, with a capital stock of $50,000. It is proposed to construct a railway 25 miles in length from Anderson to Lapel, via Elmwood. The incorporators of the company, who are also proprietors of the American Tin Plate Co., of Elmwood, are Lucius H. Landon, Pres.; W. M. Leeds, Secy.; D. G. Reid, of Richmond, Ind.; W. M. Leeds, of Chicago, Ill., and others.

GEORGIA.—Press reports state that the Southern Mining & Mfg. Co., of Atlanta, Ga., successors to the Georgia Mining & Mfg. Co., has decided to extend the railway on its mineral lands, in Bristow county, near Cartersville, Ga., 6 miles to another mine.

GULF, LOUISIANA & GREAT NORTHERN.—Geo. J. Porter, Secy. St. Louis Construction Co., 1101 Chemical Bldg., St. Louis, Mo., informs us that the surveys have been made and the right of way obtained for the construction of this road from Arcadia to Alexandria. The completed line will extend from Fort Smith, Ark., to Vermilion Bay, via Colfax and Arcadia, La., a total distance of 271 miles. The capital for construction has been secured, and it is expected to begin work on about Jan. 25. Subcontracts will be let in February. D. P. Alexander, Pres. East St. Louis Construction Co., East St. Louis, Ill.; J. J. Waltz, Pres. Gulf, Louisiana & Great Northern, Atchison, Kan.

KRAMER & RANDSBURG.—Reports state that Ramish & Marsh, of Los Angeles, Cal., have finished the construction of this line from Kramer to Randsburg, Cal., and that further extensions will soon be made to Keeler, Cal., a distance of about 100 miles.

LEAF & PEARL RIVERS.—Reports state that the J. J. Newman Lumber Co., of Hattiesburg, Miss., and others will construct a steam railway from Hattiesburg to Columbia, a distance of about 30 miles.

LAS VEGAS, MORA & TAOS.—Robt. L. M. Ross, Secy., East Las Vegas, N. Mex., informs us that the right of way has been partly obtained and that location surveys will soon be made. The capital for construction has not yet been secured, but it is expected that the contracts will be let within two months, as $117,500 of the stock has been paid up and issued. The route will run through a rich farming and timber district with a population of about 36,000, being from Las Vegas to Taos, via Mora, a distance of about 85 miles. A compound steam and electric motor system will be used. The company has a guarantee from one 3,000-acre sugar beet farm, with a tonnage of 22 to the acre and with products containing 19% of saccharinity. Mr. Ross suggests that 3,000 more acres can be secured free and that it would be a good opportunity for a 100,000-ton plant. Pres., F. A. Manzanares, East Las Vegas; Treas., Edward B. Wheeler, East Wilton, Mass.

NATIONAL INTEROCEANIC RY., ISTHMUS OF TEHUANTEPEC.—Press reports state that this line has been leased by Sir Sweetman Pearson & Son, for a period of 50 years, to begin April 1. It is said that the lessees will build harbors at Salina Cruz and Coatzacoalcos, and also reconstruct the railway itself, as it is in poor condition. Secy., F. Z. Mena, Mexico, Mex.

NORFOLK, VIRGINIA BEACH & SOUTHERN.—Press reports state that a 22-mile extension of this railway has practically been completed and will be opened to traffic about March 15. This new line is standard gage, and extends from Kempsville, 4 miles east of Norfolk on the present line, to Princess Ann Court House. Thence it takes a southerly course to Munden Point, on the Currituck Sound, a distance of 12 miles. Extensive terminals are being constructed at Munden Point, including a steamboat landing, where connections are to be made with points on adjacent inland waters. The new road will also tap the peanut industry in a prolific quarter. Pres., Alfred Skitt, 3 Beaver St., New York.

SIERRA MADRE LINE.—The official opening of the Rio Grande, Sierra Madre & Pacific Ry. took place at Ciudad Juarez, Mexico, Jan. 19, when Governor Miguel Ahumada officially named the railway the "Sierra Madre Line." The railway has just been completed, and is 150 miles long, extending from El Paso, Tex., to Casas Grandes, in the State of Chihuahua. Casas Grandes is in the eastern foothills of the Sierra Madre Mountains, which are famous for their mineral wealth. The officers of the road are: Pres., A. Foster Higgins; Treas., Solon Humphreys; Secy., George Rowland, 54 Exchange Place, New York, N. Y.

SPRING GARDEN CONNECTING.—This company was incorporated in Pennsylvania, Jan. 24, with a capital stock of $200,000, to construct a steam railway from Reserve township, Allegheny county, to the north line of Allegheny, a distance of three miles. Pres., Wm. O. Kirkland, Beaver county; Directors, Frank Felkel, Pittsburg; and Jas. D. Swindell, Allegheny, Pa.

SOUTHERN.—C. H. Hudson, Ch. Engr., Washington, D. C., informs us that the report that the Southern Ry. Co. will build an extension in Marion county, Tenn., and from Stevenson, Ala., to Chattanooga, Tenn., is simply a rumor without foundation.

STOCKTON & TUOLUMNA.—Mrs. Annie Kline Rikert, Pres., Grand Hotel, San Francisco, Cal., informs us that the preliminary surveys have been made and most of the right of way obtained for this proposed railway from Stockton to Summerville, via Copperopolis, Rossland and Sonora, Cal., a distance of 60 miles. The company was incorporated Dec. 24 with a capital stock of $1,000,000. The capital is partially secured, and it is expected to let contracts at once. The principal contractors are Erickson Bros. It is the ultimate intention of the company to extend the line to Salt Lake City, thereby shortening the present distance by rail 200 miles. Henry A. Brainerd, Ch. Engr., Grand Hotel, San Francisco, Cal.

WHITE OAKS & KANSAS CITY.—This company was incorporated in New Mexico Jan. 20, with a capital stock of $4,000,000. It is proposed to build a road from the vicinity of White Oaks, N. Mex., to points on the New Mexico & Texas line, in Union county, about 250 miles north, connecting with a road of the same name, to be chartered under the laws of Texas. Surveyors will be sent into the field immediately. The incorporators are J. A. Eddy, W. A. Hawkins, H. A. Connor, C. L. Christie and W. H. Austin. The directors are C. D. Simpson, Scranton, Pa.; B. S. Harmon and G. C. W. Lowry, New York; John A. Eddy, Denver, Colo.; C. B. Eddy, W. A. Hawkins, Max Frost, N. Mex., most of whom are interested in the El Paso & Northeastern Ry., now being built by the New Mexico Ry. & Coal Co., 66 Broadway, New York.

WISCONSIN & MICHIGAN.—Press reports state that this company will contsruct 30 miles of track between Marinette and Iron Mountain, Mich., at a cost of about $500,000. Work is expected to begin in the spring. S. M. Fischer, Pres. and Gen. Mgr., Menominee, Mich.

STREET AND ELECTRIC RAILWAYS.

LEWISTON, ME.—John A. Jones, Ch. Engr., Lewiston, Brunswick & Bath Electrical R. R. Co., Lewiston, Me., informs us that the preliminary surveys have been made and most of the right of way secured for this proposed line from Lewiston to Bath, via Lisbon, Topsham and Brunswick, Me., a distance of 28 miles. All the material has been purchased, and the company may build the road itself; if contracts are let it will be in the early spring. Pres., M. B. Shaw, Bath, Me.

EXETER, N. H.—We are informed that the Exeter & Hampton Electric Ry. Co., represented by W. D. Lovell and others, has purchased the franchise of the Exeter & Amesbury and the Exeter & Epping railways, and that it is proposed to construct the same during the coming season. Ralph D. Hood, of Haverhill, Mass., is now making surveys for the main line from Hampton to Amesbury.

MARLBORO, MASS.—Francis D. Vinton, Fayville, Mass., informs us that the proposed line of the Marlboro, Southboro & Framingham Street R. R. Co. will extend from Marlboro to Framingham Centre, via Southboro, a distance of 8 miles, and that most of the route has been surveyed. The organization has not yet been completed, but $100,000 of the necessary capital has been secured, and rails and sleepers distributed. Franchises have been granted and the contract has been awarded to James F. Shaw & Co., Exchange Bldg., Boston, Mass.

MONTEREY, MASS.—H. F. Keith, Ch. Engr., New York & Berkshire Ry., Mount Washington, Mass., informs us that no effort will be made to secure capital for constructing this proposed electric line until the Massachusetts Legislature grants the company a charter. The line is projected to run from a connection with the New York Central & Hudson River R. R., at Copake Iron Work, N. Y., to Monterey, via Mount Washington, Egremont and Great Barrington, a distance of 24 miles. The maximum grade is 6%.

NEW BEDFORD, MASS.—The Brocton, Bridgewater & Taunton St. Ry. Co. has applied for the necessary franchises for an extension of its line from Bridgewater to New Bedford. It is proposed to construct the road through Titicut, North Middleboro and Lakeville.

NORWICH, CONN.—Reports state that financial aid has been secured to construct the Montville St. Ry. to run between Norwich and New London. Pres., Solomon Lucas, Norwich.

DELHI, N. Y.—James F. Scott, Andes, N. Y., informs us that no surveys have yet been made but the right of way has been secured for the proposed trolley line of the Delaware Valley Ry. Co. from Delhi to Bovina Centre, via Andes, a distance of 15 miles. The capital necessary for construction has not been secured, so the company is not yet prepared to let contracts. Pres., Henry Davie, Andes.

NIAGARA FALLS, N. Y.—The Niagara Falls & Suspension Bridge St. Ry. Co. has applied to the board of aldermen for a franchise to build a cross-town line from the north end of the city to a line connecting with the Pan-American Exposition grounds. A hearing will be given Feb. 7. Secy., Chas. B. Hill.

NEW ROCHELLE, N. Y.—We are officially informed that the surveys have been completed and the capital secured for the proposed electric railway to be built by the Huguenot Electric Ry. Co. Starting near the station of the New York, New Haven & Hartford R. R., in New Rochelle, the line will pass through the village towards Glen Island, along the Shore Road to Travers Island, thence through Pelham Manor, connecting with the trolley road from Mt. Vernon, and thence northward through Scarsdale to White Plains; from this place connections will be made with Mamaroneck and Larchmont, returning along the Boston Post Road to the place of starting, thus making a circuit 25¾ miles in length. In the construction of the railway, 70-lb. T rails will be used, with girder construction. In the towns iron poles will be erected, and the company will pave between the tracks and 18 ins. on either side with Belgian block. At present the company is simply awaiting the granting of franchises by the towns through which it will pass. Applications for the same have been made and it is expected that they will speedily be granted. When all of the rights of way are secured material will be purchased and active work undertaken. Pres., Jas. G. Duy, 100 Broadway, New York; Vice-Pres. and Gen. Mgr., Jas. H. Burchell, New Rochelle; Secy., N. J. Burchell, New Rochelle; Counsellors, Van Schaick & Norton, 100 Broadway, New York. Reference to the incorporation of the company was made in our last issue.——It is reported that a hearing on the application of the New Rochelle Electric Ry. Co. will be held before the village trustees on Feb. 9.

NEW YORK, N. Y.—The Kingsbridge R. R. Co. was incorporated, with a capital stock of $1,000,000, Jan. 25, to build and operate a street railway with any motive power other than steam. The length of the road is to be 8 3-5 miles, and the termini are as follows: Manhattan St., at its intersection with the Boulevard; northernmost point of the intersection of Kingsbridge Road, or Broadway and West 230th St.; Riverdale Ave., at the northerly line of the city of New York and the intersection of Kingsbridge Road and Amsterdam Ave., at or near 162d St. The directors are: Henry Hart, Edward Lauterbach, Albert J. Elias, Charles Remsen, Henry Iden, David C. Andrews, J. H. Waydell, and John Byrnes, all of New York; G. Howland Leavitt, of Flushing (L. I.), N. Y.

RYE, N. Y.—The Port Chester St. Ry. Co. has received a franchise from the highway commissioners of this town for the construction of a trolley line from the corporation line to Rye Beach, over Midland Ave., Post Road, Purdy and Purchase Aves., Milton Road and Beck Ave. It is said that 70-lb. steel rails will be used, and that work will commence as soon as possible, as the company has given a bond to complete the road by June 1. Comrs., Samuel H. Graham and M. B. Weir.

HARRISON, N. J.—The Harrison & East Newark Connecting R. R. Co. was incorporated Jan. 19, with a capital stock of $50,000, with all paid in, to build and operate a railway in Harrison. The incorporators are William Fairlie, Geo. F. Robertson, Thos. J. George, Chas. W. Kinsey, Jos. P. McFadden and Bernard M. Shanley, all of Newark, N. J.; Frank M. Stillman, Rahway, N. J.

BOYERTOWN, PA.—Press reports state that work on the new electric railway, to be built from Boyertown to Reading, a distance of 20 miles, will be commenced this week, and that the construction will be superintended by E. J. Eberly, of Philadelphia.

IRWIN, PA.—The McKeesport & Irwin St. Ry. Co. was incorporated Jan. 24, with a capital stock of $120,000, with $12,000 paid in. It is proposed to build an electric street railway from Irwin to McKeesport. Pres., John George; Directors, C. R. Fritchman and W. W. George, all of Irwin.

NEWPORT, DEL.—Reports state that surveys have been completed for the extension of the Wilmington & Newport Electric Ry. from New Castle to Newport.

WASHINGTON, D. C.—Preliminary surveys are now being made by Edmund Saxton, 1244 11th St., N. W., according to reports, with a view to ascertaining the cost of equipping the Eckington & Soldiers' Home Ry. with electricity. O. B. Crosby is a director of the company.

PORTSMOUTH, VA.—It is reported that surveys are now being made for an extension of the Portsmouth St. Ry. to Churchland, a distance of 5 miles. Pres., J. G. Siegfried.

CINCINNATI, O.—John B. Martin, of Cincinnati, informs us that the construction of the proposed Cincinnati, Mount Washington & Bethel Electric Ry. stands in obeyance to the action of the commissioners.

BATTLE CREEK, MICH.—Press reports state that a New York syndicate proposes to buy the electric street railway in this city and also the line which will be built from this city to Kalamazoo.

CHICAGO, ILL.—It is reported that the suburban trains of the Chicago, Milwaukee & St. Paul Ry. will soon be operated by electricity instead of steam, and that the electric power will be furnished by the North and West Chicago St. Ry. Cos. D. J. Whittemore, Ch. Engr., Chicago.—— Alderman Spencer S. Kimbell has introduced an ordinance into the council which grants a franchise to the Wisconsin Inland Lakes & Chicago Ry. Co. to enter this city. The proposed trolley line will be about 78 miles long when completed, with two branches terminating at Elgin, Ill., and Wilmot, Wis. It is said that some of the contracts have already been let.——Other franchises have been asked by the Chicago Central Electric R. R. Co. and the Chicago City Ry. Co. for the building of extensions.

GALESBURG, ILL.—Fred Seacord, Pres. Galesburg Electric Motor & Power Co., informs us that he has just completed a survey for the proposed railway between Monmouth and Galesburg, a distance of 17 miles. It is not certain at present when the line will be built.

JOLIET, ILL.—The Joliet City Ry. Co. was granted a 50-year franchise by the council Jan. 17 for the building of several miles of railway in this city.

WAUKESHA, WIS.—The Waukesha Electric Ry. Co. is going to build an addition to its power house in this city, 250 × 46 ft., and put in new engines, boilers and dynamos, and the lines from North Greenfield through Waukesha to Pewaukee Lake will be operated by this power house. The company has changed the location of its line into this city, and will now come in direct by way of Lincoln Ave. and Broadway.

KANSAS CITY, KAN.—The Kansas City, Lawrence & Topeka Electric Ry. & Power Company, which was recently incorporated in Missouri, was organized in Kansas, Jan. 19, with a capital stock of $3,000,000. It is said that the right of way will be secured as soon as possible, and that it is expected to have the line in operation as far as Lawrence by the end of the year. The officers are: Pres., E. B. Purcell, Manhattan, Kan.; Secy., John G. Johns, Houston, Tex.; Treas., James Haggart, Kansas City, Mo.

CANON CITY, COLO.—It is reported that Orman & Crook, of Pueblo, Colo., were awarded the contract, Jan. 15, for the construction of an electric railway from Canon City to Victor. A bond for $75,000 has been given that the road will be ready for operation by Sept. 1.

LOS ANGELES, CAL.—Clara R. Shatto and J. S. Maltman have petitioned the council for the right to construct and operate an electric railway from West 17th St. to Willshire Boulevard and thence to Virgil Ave.

ELECTRIC LIGHT AND POWER.

EXETER, N. H.—The Rockingham Electric Co. proposes to complete the contract for lighting Exeter at once.

BALDWINSVILLE, MASS. — Gilman Waite, E. L. Thompson and L. D. Day are securing signatures to a petition asking the legislature for permission to construct a plant to light this place and Otter River.

DANVERS, MASS.—The question of constructing a municipal plant is being considered, according to reports. Estimated cost, $15,000.

GREENFIELD, MASS.—It is reported that the Greenfield Electric Light & Power Co. will soon put in a new 250 HP. boiler at a cost of $3,000. Pres., F. E. Wells; Secy., Chas. H. Keith; Audr., F. E. Pierce.

MYSTIC, CONN.—Thos. C. Perkins, Consult. and Elec. Engr., has submitted a report and estimates for a plant to light this city, Stonington and Noank; estimated cost, $21,052.

BRENTWOOD (L. I.), N. Y.—G. B. Studley writes us that the lighting district, embracing Brentwood, was created by the town board Jan. 21. Bids for lighting will be asked by the town clerk of Sayville. It is probable that the only bidders will be the Bay Shore Electric Light Co., whose power house is three miles distant. There will be required 50 street lights, besides private lights.

CHATHAM, N. Y.—The improvement of the plant at Payn & Blinn's mill is reported as proposed.

CLINTON, N. Y.—T. T. Thompson, Village Pres., writes us that the town is waiting for proposals, and when a suitable number is received a meeting will be called and a vote for the best proposition will be taken. G. R. Taylor and C. Seymour are on the committee.

COXSACKIE, N. Y.—The village trustees are said to have received four applications for light franchises.

FORT HUNTER, N. Y.—Press reports state that Dr. H. A. Devendorf and De Witt A. Devendorf are preparing to erect water power plants to furnish power and light to Mohawk valley towns, manufacturing plants. A 15-year contract is said to have been awarded for furnishing power to certain light companies.

HONEOYE FALLS, N. Y.—It is stated that Buffalo and Corning parties are considering the question of constructing a plant to light this place and Lima; and also to furnish power to the Lima & Honeoye Falls R. R.

MASSENA, N. Y.—Press reports state as follows: The Lehigh Valley Construction Co., of South Bethlehem, Pa., on Jan. 17, filed in the St. Lawrence County Clerk's Office a deed of general assignment. The company had a sub-contract from the St. Lawrence Construction Co. to do the work on the Massena and for the St. Lawrence Power Co., which is capitalized at $6,000,000. The Lehigh contract was said to have been for $2,000,000. The Lehigh Valley Construction Co. has filed a mechanics' lien against the power company for $53,000, claiming to have done $78,000 worth of work during the past summer, for which it has received only $25,000.

NEWPORT, N. Y.—W. D. Grant, Newport, is reported to have applied to the village board for a franchise.

TONAWANDA, N. Y.—An election will be held Jan. 29 to vote on the question of issuing $25,000 in bonds for a plant of 225 lights.

EGG HARBOR CITY, N. J.—Thos. T. Mather, Philadelphia, is reported to have been granted a franchise.

JERSEY CITY, N. J.—Bids are asked until Feb. 3, for furnishing two dynamos of 125 arc lights each. To be set up complete at the power house, Snake Hill, with all shafting, clutches, pulleys and belting necessary to connect the same with the engine; also all electrical connections to connect with present circuits and new circuit. Also, two ampere meters and one marble switch board. Also, for furnishing and setting up the necessary wiring to connect the dynamos at the power house with the Weehawken Branch of the Hudson Boulevard. Dynamos must be of either of the Fort Wayne Wood system, Excelsior or Brush make. Edward W. Woolley, Clk. Bd. County Freeholders, Court House, Jersey City.

BRADFORD, PA.—The council is reported to have voted against constructing a plant to cost about $25,000.

MARYSVILLE, PA.—J. W. Beers and John Homer, of Marysville, and J. A. Herman, of Harrisburg, Pa., are reported as organizing a company to put in a plant.

NORRISTOWN, PA.—Bids are asked by the finance committee until Feb. 9 for constructing a plant. Population, about 25,000. Consult. Engr., W. A. Drysdale, Hale Bldg., Philadelphia.

PITTSBURG, PA.—The board of inspectors of Western Pennsylvania have examined plans for the proposed electric light plant to be erected in the penitentiary.

SELLERSVILLE, PA.—The question of lighting this place is being considered, according to reports. Population, 1,000.

MOUNT SAVAGE, MD.—It is stated that the electric plant of the Cumberland & Pennsylvania R. R. at Mount Savage will be enlarged and electricity furnished to stores, churches and dwellings. It is possible that some of the streets in the town will be lighted with electricity from this plant.

WASHINGTON, D. C.—Adolph Meyer has introduced in Congress a bill authorizing the U. S. Electric Lighting Co. to extend its conduits and mines under all the even numbered streets of the city and the Potomac Electric Power Co. under all the odd numbered streets.

WASHINGTON, D. C.—The McCay-Harvard Engineering Co., Baltimore, has been awarded the contract for installing the motive power for the electric light and power plant in the new city post-office, at $17,525. The contract calls for putting in four Buckeye tandem compound engines and four Thresher dynamos. The contract for wiring the building was recently let at $20,650.

BERKELEY, VA.—Arrangements are reported as being made by northern parties for a new plant in this place.

RICHMOND, VA.—The Home Electric Co. has been granted permission to erect poles, string wires, construct subways, etc., for a plant.

KINGWOOD, W. VA.—J. S. Brown, Recdr., writes us that a plant of 1,000 incandescent and 20 arc lights will be erected in the spring; estimated cost, $10,000, to which amount bonds have been voted. Up to Jan. 24 no engineer had been engaged.

GREENWOOD, S. C.—Nisbet Wingfield, Norcross Bldg., Atlanta, has submitted a report on the proposed plant and water-works, for which $40,000 in bonds was issued in October.

ORLANDO, FLA.—B. C. Abernethy & Co. are reported to have organized a company to build a plant at once.

MARTIN, TENN.—A bill is before the legislature authorizing this place to issue bonds for a plant and water-works.

NASHVILLE, TENN.—We are informed that the Nashville Electric Light Co., recently organized, as noted in our issue of Jan. 13, is not yet ready to build a power plant. Col. C. M. McGhee is interested.

ROGERSVILLE, TENN.—H. J. Nelson, Mayor, writes us that the proposition to erect a plant and water-works was rejected by the people. The town is still desirous of securing the improvements and it is hoped a company will offer to furnish them.

CINCINNATI, O.—Elzner & Anderson, Archs., 227 Main St., are ready to receive bids for constructing and furnishing an Edison electric light plant, according to local papers. The smokestack will be 200 ft. high and 16 ft. in diameter. Steel girders 6 ft. high and with a span of 45 ft. will be used. The coal will be supplied to the furnace from great steel bins overhead, which will be supplied by carrier buckets working on endless chains from the street level and dump automatically into the bins. The same carriers will collect and store the ashes. A cooling tower 12 ft. wide and 30 ft. high will extend the length of the building.

SPRINGFIELD, O.—It is reported that communications from various cities throughout the country which have municipal plants are being solicited by a special committee of the council, which has been appointed to investigate with what success the project has met.

SYCAMORE, O.—R. S. Galleher, Mayor, writes us that this place voted Jan. 17 in favor of a plant and water-works, to cost about $20,000. Bonds will be sold at once. It is hoped to begin work early in the spring. Burton J. Ashley, Opera House Block, Chicago, Ill., is making estimates. Population, 1,000.

ALBANY, IND.—The L. C. Olds Construction Co., Indianapolis, Ind., is reported to have been awarded the contract for constructing a plant in this city; estimated cost, $20,000.

SHERIDAN, IND.—The contract for completing the plant is reported to have been awarded last week.

DETROIT, MICH.—Residents of the north side are reported by local papers as about to organize a new company to secure a better light service in that part of the city.

ESSEX, MICH.—It is reported that this place is making arrangements to build a plant.

SAULT STE. MARIE, MICH.—Press reports state as follows: The Edison Sault Ste. Marie Electric Co. on Jan. 12 decided to construct a 4 ft. conduit to carry its wires from the power house to other side of the government canal. The conduit will be laid one foot below the rock bottom of the canal. It will be made of 5-16-in. steel, and its dimensions are large enough to admit of a man going through it and making any necessary repairs to the wires and cables therein. Besides being used by the Edison Co., the telegraph and telephone companies and the Lake Superior Carbide Works will also use it. The total weight of the conduit will be 59,000 lbs. and it will be 375 ft. in length. About 375 yds. of rock will have to be taken out and the pipe under the canal will be cemented over. The cost of the conduit is estimated at about $5,000 and work will be commenced as soon as the specifications can be completed and the contracts let. Pumps for keeping the canal free of water while the work is going on have been ordered.

FLORA, ILL.—W. A. Fuller is reported to have been granted a 20-year franchise for furnishing the town with 30 arc lights at $66 a year.

HUDSON, WIS.—Christian Wangsgard is reported to have leased the electric plant. It will be connected with a dam four miles distant. Other improvements are proposed.

DES MOINES, IA.—Local papers state that Adams, Green & Co., Morrison, Ill., will probably soon begin the construction of the proposed city plant, to cost about $20,000.

SAC CITY, IA.—The council is reported to have been petitioned to construct a plant.

MORGAN, MINN.—The question of constructing a plant is being considered, according to reports.

ORTONVILLE, MINN.—Bids are asked until Feb. 8 for the purchase of $15,000 of 5% water and light bonds according to reports. Bids for the work were received Nov. 22. Engr., C. F. Loweth, St. Paul; Recdr., S. A. Thomas.

MILLBANK, S. DAK.—It is reported that Robt. Nichol proposes to light this place, power to be served from the grist mill owned by him.

DEERLODGE, MONT.—Conley & McTague are reported as investigating the question of putting in a plant.

KANSAS CITY, MO.—Jacques Morgan, Cy. [illegible] Engr., is reported to have submitted a report and estimates for a plant to cost about $99,600. The plant would require about 375 lights, 225 miles of wire, etc.

MINEOLA, TEX.—Mr. Tilley, of Jacksonville, Tex., has secured subscribers for over 300 lights, to be furnished by a proposed plant, according to reports.

STERLING, COLO.—The cost of erecting a plant and water-works is being considered by A. S. Shoemaker, C. M. C. Woolman, J. C. Aikin and Messrs. Sherman, Chipman and Crissman.

CASPER, WYO.—M. Maghee, it is reported, will soon begin the construction of a plant of 750 lights.

LOS ANGELES, CAL.—The Pasadena Electric Supply & Fixture Co., Pasadena, Cal., has been awarded the contract for putting in the electric wires for heating and lighting the Hotel Green Annex at $4,200.

WOODLAND, CAL.—Bids will probably soon be asked by the supervisors for the purchase of an electric light franchise. F. W. Page, San Francisco, has applied for a franchise.

AMERICAN FORK, UTAH.—J. H. Wotten and Jensen & Newton are reported to have applied for light franchises.

MOUNT PLEASANT, UTAH.—It is reported that several citizens of this place are organizing a company to put in a plant.

HAILEY, IDAHO.—Henry M. Ryan, of the Camas No. 1 group of mines, on the Hailey Gold Belt, has made arrangements for an electric water power plant for these mines to be put in during the spring.

BARRIE, ONT.—I. M. Wells, Mayor, writes us that it is proposed to install an electric light and power plant in connection with the newly acquired water-works. Mayor Wells wishes to correspond with electrical engineers and contractors in regard to the improvement. Population, 5,000.

ANNAPOLIS, N. S.—It is reported that the taxpayers will soon vote on the question of purchasing a plant to cost about $12,000.

WINNIPEG, MAN.—It is stated that C. J. Brown, Clk., received the following bids Jan. 10 for constructing a private or municipal plant and for furnishing light for a period of three or five years:

Goldie & McCulloch Co., Galt, Ont., steam plant	$19,310
Western Electric Co., Chicago, Ill.	$20,850 to 21,150
Robb Engineering Co., Amherst, N. S.	19,330 to 21,200
McDonald Bros., Winnipeg, Man.	22,500
W. A. Johnson Elec. Co., Toronto, Ont., 200 lights	19,265
W. A. Johnson Electric Co., 250 lights	22,300
Fort Wayne Electric Corporation, Fort Wayne, Ind.	9,285
Royal Electric Co., Montreal, Que.	*10,000
Canadian General Electric Co., Toronto	12,540

Manitoba Electric Light & Gas Co., Winnipeg, 47 to 45 cts. a light a night for 121 lights a year, for a period of two to five years, and for 200 lights, 39 cts. a light a night.
Northwest Electric Light Co., Winnipeg, 121 to 200 lights, 40 cts. a light a night.

*Installing and bricking, extra, $9,500.

NEW COMPANIES.—Nanaimo Electric Light, Power & Heating Co., Nanaimo, B. C.; to furnish light and power to places within a radius of 15 miles of Nanaimo; Bedwell, Irving & Dug, Solicitors.

American Heat, Light & Power Co., Baltimore, Md.; $100,000; Arthur F. Spice, Percy B. McLaren, Nicholas P. Bond, Edward P. Hill, Baltimore; Nathaniel Z. Seitz, Reading, Pa.

Elkin Electric Light & Power Co., Elkin, N. C.; $2,000; Alex M. Smith, Gilvin T. Roth, Hugh G. Cheatham.

Muscle Shoals Power Co., Sheffield, Ala.; to develop the power at the Muscle Shoals, on the Tennessee River, about eight miles above Sheffield and Florence, and to erect an electric plant for furnishing light, heat and power within a radius of 75 miles; estimated cost, $500,000; T. L. Carter, Pres.; C. B. Ashe, Vice-Pres.; J. R. Coleman, Secy. and Treas.

Metropolitan Electric Construction Co., New York, N. Y.; to equip electric railways, elevators, etc.; $50,000; Albert B. Chandler, Edward C. Platt, Brooklyn; E. H. Johnson, New York; W. D. MacQuesten, H. T. Jennings, Mount Vernon, N. Y.

Salem Electric Light & Power Co., Salem, N. Y.; $10,000; to operate a plant, the contract for which has been awarded to Edgar W. Philo, Salem; Pres., Wm. Walker; Secy., Jas. H. Houghton; Treas., C. A. Beattie.

Volta Electric Light & Power Co., Charleston, W. Va.; $100,000, with $5 paid in; I. D. Baldwin, Geo. W. Ferry, New York; E. W. Brown, Brooklyn; R. F. Woodward, Richmond, S. I., N. Y.

Standard Cold Electric Light Co., Alexandria, Va.; $100,000; to manufacture, contract for the manufacture of and buy and sell cold electric lamps for dental and surgical use, and other lamps and electric devices; Pres., Jno. Boyd, Washington.

Triumph Light, Heat & Power Co., Philadelphia, Pa.; $200,000, with $5,000 paid in; Luther Martin, Jr., Wm. S. Miller, H. M. Hamrick, Philadelphia.

Philadelphia Electric Light, Heat & Power Co., Philadelphia, Pa.; $1,000; Treas., Jos. R. Emberg, 14 South Broad St., Philadelphia; G. R. Green, J. J. McCarthy.

BRIDGES.

BOSTON, MASS.—Bids are asked by the Boston Transit Commission, 20 Beacon St., Boston, until Feb. 3 for constructing the draw foundation and fender piers for the Charlestown bridge, as stated in our advertising columns. Geo. G. Crocker, Chn.; B. Leighton Beal, Secy.

MIDDLETOWN, CONN.—Reports state that plans have been contemplated for the construction of a bridge for the Air Line Division of the New York, New Haven & Hartford R. R. over the Connecticut River at this place.

UTICA, N. Y.—Senator Coggeshall has introduced a bill for the appropriation of $18,000 for a bridge over the Erie Canal at Schuyler St.

SANDY HILL, N. Y.—A bill has been introduced in the legislature by Mr. Paris for the appropriation of $6,000 for the construction of a new steel bridge at Main St., according to reports.

TONAWANDA, N. Y.—A bill appropriating $6,000 has been introduced by Mr. Patton for the construction of a stone arch bridge over Delaware St.

SYRACUSE, N. Y.—A bill has been presented in the legislature by Assemblyman Bondy, according to reports, for the construction of a lift bridge over the canal at Catherine St.

SNYDERTOWN, PA.—Local papers state that the reports submitted by the viewers for the construction of two bridges over Bald Eagle Creek, in Snyder township, have been approved by the grand jury.

CHESTER, PA.—Press reports state that the Philadelphia, Wilmington & Baltimore R. R. Co. is willing to construct a $40,000 bridge over its tracks at Lloyd St.—— Benner & Ondyke, 1222 Belmont Ave., Philadelphia, have been awarded a contract, according to reports, to construct a new bridge for the Philadelphia & Reading Ry. across Chester Creek at Front St. It will be built of yellow pine, heavily braced.

NEW KENSINGTON, PA.—The council has passed an ordinance granting a franchise to the New Kensington Bridge Co. to construct a bridge from Ninth St. to Bouquet Station. M. D. Wayman, Pres.; Wm. Graham, of the Mercantile Trust Co. of Pittsburg, Treas.; J. P. Frank Peffer, Secy.; Col. Wm. A. Stone, Allegheny, Albert Wayman are the directors.

DEFIANCE, O.—Reports state that the Wabash R. R. has agreed to construct steel bridges with stone abutments over its tracks at North Clinton St. and at Ralston Ave., to have a width of 36-ft. Jos. Ramsley, Jr., Vice-Pres. and Gen. Mgr., St. Louis, Mo.

BUCYRUS, O.—The commissioners are considering the question of building a bridge across the river on North Sandusky Ave., and have asked the council to state the width and specifications desired. L. H. Battfeld, County Comr.

GRAND RAPIDS, MICH.—Bids are asked until Jan. 28 for furnishing 62,000 ft., B. M., of white oak bridge plank. Dudley E. Waters, Pres.; F. A. Twamley, Clk. Bd. Pub. Wks.

SAGINAW, MICH.—The plans and specifications submitted by H. C. Terry, Cy. Engr., for the construction of a bridge at Court St., to cost about $66,500, have been approved by the board of public works and are to be referred to a committee consisting of Aldermen Rosevear, Fordney, Higgins, McLean and Bird.

SAGINAW, MICH.—An ordinance is before the council to construct a new bridge at Bristol St., the old one having been condemned. Supervisor Sears may be addressed.

BEARDSTOWN, ILL.—A 30-year franchise has been granted to the Beardstown Bridge Co., which has been organized by Wm. Huppers, Pres., Jas. P. Harriss, Secy., J. E. Garin, and J. E. Duvall, to construct and maintain the new steel bridge across the Illinois River at this place.

OSKALOOSA, IA.—Thomas H. Givens, Oskaloosa, has been awarded a contract by the county commissioners to construct iron bridges during 1898.

OMAHA, NEB.—The Canton Bridge Co., Canton, O., was awarded a contract Jan. 20, at $9,350, by the board of park commissioners, for constructing bridges over the Lagoon. The total bids, with those for piling, are given under Contract Prices.

BOZEMAN, MONT.—It is reported that the Gillette-Herzog Mfg. Co., Minneapolis, Minn., has been awarded a contract at $3,300, for constructing a county bridge over the West Gallatin River at Shedds.

LECOMPTON, KAN.—The county commissioners have passed an ordinance and will soon advertise for bids for the construction of a bridge over the Kaw River, to cost about $15,000, of which $8,000 has been voted.

CHEHALIS, WASH.—The county commissioners have authorized the construction of a bridge over the Chehalis River on the Lincoln Creek road.

MOUNT VERNON, WASH.—Bids are asked until Jan. 31 for constructing pile bridges 300 ft. and 400 ft. long, respectively. Henry Gay, County Surv.

EUGENE, ORE.—Bids are asked until Jan. 28 for constructing a 100-ft. span bridge with 50 ft. approaches, according to reports. A. C. Jennings, Clk.

MORO, ORE.—Reports state that Wm. Holder, R. P. Orr and Frank Sayer, County Comrs., have been appointed a committee to consider the question of constructing a bridge to connect Sherman and Gillman counties.

MODESTO, CAL.—It is reported that the county supervisors have resolved to construct a bridge across the San Joaquin River, near Old Hills Ferry, provided that Merced county agrees to share the expense.

RIVERDALE, UTAH.—Bids are asked until Jan. 31 for constructing an iron or steel truss bridge, 130 ft. long and 16 ft. wide over the Weber River, near this place. Newton Farr, County Clk.

POSTFALLS, IDAHO.—Reports state that the citizens of Postfalls have subscribed $1,700 toward the construction of a county bridge across the Spokane River. Address county commissioners at Rathdrum.

LEWISTON, IDAHO.—A bridge will be constructed by the Lewiston branch of the Northern Pacific R. R., according to reports, across the Clear Water River, to have five fixed Howe truss spans 150 ft. long and a draw span of 250 ft.

COEUR D'ALENE, IDAHO.—It is reported that steps are being taken to secure the construction of a bridge over the Spokane River at a point on or near the military reservation. Committees have been appointed to solicit subscriptions and secure signatures to a petition asking the county commissioners to assist in building the bridge.

HONDA, COLUMBIA, SOUTH AMERICA.—The Massillon Bridge Co., Massillon, O., has been awarded a contract for the construction of a cantilever bridge 562 ft. long and 18 ft. wide, which is to be built by the New York Dredging Co. across the Magdalena River, at this place, according to reports.

BUILDINGS.

FALLS RIVER, MASS.—Plans are now being prepared for a 4-story brick and stone jail building to be erected in this city at a cost of about $125,000. Edward Mott, Chn. County Comrs.; N. C. Smith, Arch., 70 Norfolk St., New Bedford, Mass.

WHITINSVILLE, MASS.—Bids will soon be received, according to reports, for the construction of a stone church building for the Congregational Church, to cost about $75,000. Edward Whitin, Chn. Bldg. Com.; Shepley, Rutan & Coolidge, Archs., Ames Bldg., Boston, Mass.

BUFFALO, N. Y.—We are informed that plans have been prepared for the proposed new 10-story hotel to be built at Chippewa St. and Delaware Ave., at a cost of about $1,000,000. Archs., George Palliser & Co., 32 Park Place, New York.

NEW YORK, N. Y.—Bids are asked by the supervising architect, Washington, D. C., until Jan. 31, for all the materials and labor required for building the approaches of the U. S. Appraiser's Warehouse, in this city.——Bids are asked by the board of education, at 585 Broadway, until Jan. 31, for erecting an addition to Public School 98, etc. Richard H. Adams, Chn. Com. on Bldgs.——Reports state that the trustees of the Franklin Savings Bank have decided to erect a new bank building on its present site at 42d St. and 8th Ave., at a cost of about $240,000. Pres., Archibald Turner.——Plans have been filed by Weil & Mayer, 227 East 60th St., for two 6-story brick flat and store buildings at 51 and 53 Henry St., to cost $50,000. Archs., Schneider & Herter, 48 Bible House; by Edward Jenkins, 535 West 144th St., for five 5-story brick flat and store buildings at 133d St. and Amsterdam Ave., to cost $118,000. Arch., W. Cunningham, 55 Lexington Ave.; by Neils Hansen, 647 Amsterdam Ave., for four 5-story brick flat and store buildings, at 148th St. and Amsterdam Ave., to cost $88,000. Archs., Angell & Higginson, 108 Fulton St.; by Peter J. Herter, for a 5-story brick tenement building at 135 and 137 West 10th St., to cost $50,000. Archs., P. J. Herter & Son, 1032 Lexington Ave.; by Miss C. W. Bruce, 810 5th Ave., for a 9-story brick store and loft building at Broadway and Canal St., to cost $140,000. Archs., Jordan & Giller, 19 Park Place; by the city for a 3-story brick museum in Central Park, at 5th Ave. and 82d St., to cost $800,000. Arch., R. H. Hunt, 28 East 21st St.

CENTRAL ISLIP (L. I.), N. Y.—The following bids were received by the Manhattan State Hospital, Jan. 20, for the construction of three cottages at this place; Henry E. Howland, Pres. Bd. Mgrs., 1 Madison Ave., New York:

P. J. McCafferey, Utica, N. Y.	$75,000
Joseph J. Churchyard, Buffalo, N. Y.	76,862
Grace & Hyde Co., 26 East 42d St., New York	79,950
A. Pasquini, Albany, N. Y.	83,198
H. Probst, 1180 Broadway, New York	84,497
P. J. Carlin & Co., Brooklyn, N. Y.	89,400
Velsor & Son, Islip (L. I.), N. Y.	89,471
Feeny & Sheehan, Albany, N. Y.	90,000
Bussman & Co.	92,500
P. H. Keeler, Albany, N. Y.	92,766
H. H. Emsley, New York	93,760
Walter Reed & Co., New York	93,995
Ryan & McFerran, New York	94,991
Price & Carl, New York	97,539

TARRYTOWN, N. Y.—A fire in this city, Jan. 23, destroyed a row of buildings on Main St., causing a reported loss of $25,000. Among the losers are D. S. Brown and Charles Roth.

VERSAILLES, N. Y.—Bids are asked by the board of managers of the Thomas Asylum for Orphan and Destitute Indian Children, until Jan. 29, for the erection of an administration building.

ALLEGHENY, PA.—Reports state that plans have been prepared for a new club house which will be erected in this city, at a cost of about $50,000. Charles Sherriff, Chn. Bldg. Com.; F. C. Sauer, Arch.

CHESTER, PA.—Plans are being prepared for the Chester National Bank for a new 2-story brick and stone bank building, to cost about $30,000. Pres., J. F. Black; Arch., Isaac Pursell, 119 South 14th St., Philadelphia, Pa.

HARRISBURG, PA.—Bids are asked by the Capitol Building Commission, until Feb. 7, for all the labor and materials required for the general construction of the new Capitol Building; deposit required, $15,000; bond, $150,000. Vice-Pres., Amos H. Mylin; Arch., Henry Ives Cobb, 100 Washington St., Chicago, Ill.

NEW CASTLE, PA.—Reports state that the Shenango Lodge, I.O.O.F., contemplates the erection of a masonic temple next summer, to cost about $70,000.

PITTSBURG, PA.—Press reports state that the Pittsburg Terminal Warehouse & Transfer Co. was organized in this city Jan. 14, with a capital stock of $2,000, and that a large storage warehouse will be erected on Carson St., at a cost of about $1,000,000. Among those said to be interested are Jas. A. Henderson, Pres. Pittsburg & Cincinnati Packet Co.; Samuel M. McElroy, cashier Citizen's National Bank.

PUNXSUTAWNEY, PA.—Bids are asked until Feb. 8, for the erection of a new hospital building for the Adrian Hospital Association at this place. L. W. Robinson may be addressed.

WASHINGTON, D. C.—James G. Hill, Corcoran Bldg., has prepared plans for a 7-story fireproof office building which the Columbian University will build on 5th St., between D and E Sts., N. W.——The District Commissioners have awarded the contract for constructing an 8-room school building on 6th St., between B and C Sts., N. E., to Baldwin & Peake, for $24,804.——James F. Dennison, 930 F St., N. W., has prepared plans for a row of fifteen 3-story pressed brick and brownstone dwelling houses, to be erected in Eckington.——Wm. J. Palmer, architect, has prepared plans for a row of four houses to be built on Cedar St., between 18th and 19th Sts., N. W., three stories, Roman brick and light stone fronts, tiled vestibules and hardwood trimmings.

FAIRMONT, W. VA.—It is intended to hold an election at this place March 12 to consider the advisability of erecting a new court house, to cost about $150,000.

INDIANAPOLIS, IND.—The plans for the new hall for the Knights of Pythias are said to have been completed, and it is hoped to begin the erection of the same by March 1. The building will be a 5-story structure, and will be built at Massachusetts Ave. and Pennsylvania St.

ANN ARBOR, MICH.—Jas. H. Wade, Secy. University of Michigan, informs us that they have simply asked for sketch plans for an addition to the Law Building, to cost $50,000.

IONIA, MICH.—A fire in this city, Jan. 20, destroyed the Webber Block, and other business buildings, causing a reported loss of $75,000; insurance, $35,000.

TRAVERSE CITY, UTAH.—Reports state that the board of supervisors of Grand Traverse county on Jan. 14 decided to submit to the people at the spring election the proposition of issuing $35,000 in bonds for a new court house.

CHICAGO, ILL.—Bids are asked by the board of education, 1110 Schiller Bldg., until Feb. 4, for the erection of an addition to the Lake View High School, at Ashland and Graceland Aves. Arch., Normand S. Patton, 1117 Schiller Bldg.——Bids are asked by the directors of the Chicago Public Library, until Feb. 1, for the interior finish of lavatory rooms, including plumbing, etc., in the library building in Dearborn Park. Secy., W. B. Wickersham; Archs., Shepley, Rutan & Coolidge, Old Colony Bldg.

QUINCY, ILL.—Plans are said to have been prepared for a new station to be erected here for the Chicago, Burlington & Quincy R. R. Co., to cost about $75,000. W. A. Boydston, Supt. Bldgs., Galesburg, Ill.

CRESTON, IA.—An election will be held here Feb. 8 to vote upon the proposition to assess an additional 3-mill tax for the erection of a new court house and jail building, for Union county, to cost about $25,000.

MILWAUKEE, WIS.—Bids are asked by the department of public works, until Feb. 1, for the construction of three elevator plants in the Public Library and Museum Bldg. in this city. G. H. Benzenberg, Chn. Pub. Wks.

MELROSE, MINN.—Bids are asked until March 1 for the building of a new church building for St. Boniface Church. Pastor, B. Richter.

OMAHA, NEB.—The following bids were received by the supervising architect, Washington, D. C., Jan. 25, for completion of the interior finish, iron stairs and plumbing above the first story of the U. S. court house, custom house and post office building in this city:

		Time.
W. E. Spier, Washington, D. C.	$100,000	12 mos.
D. S. Hess & Co., New York, N. Y.	93,400	12 "
S. C. Moore & Co., Kokomo, Wis.	91,827	12 "
Butler, Ryan & Co., St. Paul, Minn.	91,442	11 "
D. Getaz & Co., Knoxville, Tenn.	87,100	12 "
Hennessy & Co., St. Paul, Minn.	82,000	9 "
A. W. Phelps & Son, Omaha, Neb.	111,499	12 "
Angus, McLeod & Co., Minneapolis, Minn.	79,477	12 "
Foster & Smith, Minneapolis, Minn.	110,784	12 "
G. W. Goodlander, Kansas City, Mo.	97,142	14 "
R. J. Jobst, Omaha, Neb.	89,938	12 "
Mahoney & Wakefield, Omaha, Neb.	99,960	12 "
Hamilton Bros., Omaha, Neb.	96,500	360 dys.
Walter Patterson, Omaha, Neb.	93,889	12 mos.
Henry Hamann, Omaha, Neb.	94,940	12 "
Anderson Construction Co., St. Louis, Mo.	29,997	9 "
W. E. Frost Mfg. Co., Chicago, Ill.	90,995	11 "
L. L. Leach & Son, Chicago, Ill.	79,756	12 "
Wm. H. Ellis, New York, N. Y.	96,900	9 "

SOUTH OMAHA, NEB.—Bids are asked by the supervising architect, Washington, D. C., until Feb. 18, for the erection and completion (except heating apparatus) of the U. S. post office building in this city, as stated in our advertising columns.

SPOKANE, WASH.—A fire in this city, Jan. 24, destroyed the Great Eastern Block, at Post St. and Riverside Ave., causing a reported loss of $400,000. The building was a 6-story brick structure, erected in 1890, at a cost of about $250,000, and was owned by Louis Levinski, of San Francisco; insurance, $50,000.

WATER-WORKS.

BLACKSTONE, MASS.—Wm. P. Harrington, Clk. Water Com., writes us that bids for constructing the proposed works for fire protection in Millville, noted in our issue of last week, will be received about Feb. 15. There will be required about 2,000 ft. of 10-in. and 4,000 ft. of 8-in. pipe, 20 hydrants, a pump of 1,500 gallons capacity a minute, etc. The supply will be secured from the Blackstone River. Estimated cost, $12,040. Population, 6,000. Des. Engr., John W. Ellis, Woonsocket, R. I.; Jos. Hefferman, Town Clk.; Jeremiah Gatchell, Moderator.

WESTFIELD, MASS.—Bids are asked by the water commissioners until Feb. 23 for laying water pipe, etc., as stated in our advertising columns. Engr., Oren E. Parks, Westfield.

CHURCHVILLE, N. Y.—H. J. Snyder, Pres., writes us that this place has no intention of constructing works at this time, reported in our last issue of being considered.

JAMESTOWN, N. Y.—Assemblyman Peters has introduced a bill authorizing this city to issue bonds for municipal works.

LA SALLE, N. Y.—Press reports state that the Buffalo Engineering Co. has applied for an exclusive franchise in this place. Estimated cost, $50,000. Ex-Assemblyman Frank A. Dudley, Niagara Falls, N. Y., who is reported as interested in the company, writes us under date of Jan. 23 that the franchise has not yet been granted.

ST. JOHNSVILLE, N. Y.—Senator Krum has introduced a bill in the legislature authorizing this place to borrow $12,000 to complete its works. Supt., Archibald Allen.

BLOOMFIELD, N. J.—Wm. L. Johnson, Clk., writes us that the Orange Water Co. has offered to sell the works to the city. It is probable no action will be taken. Local papers state that the plant consists of hydrants and water mains only. If Bloomfield should purchase it, it would be necessary to locate a water supply or else arrange with the East Jersey Water Co. for a supply. Many citizens favor the locating of springs, such as are now in use by the Orange Water Co. to supply East Orange with water. In Morris neighborhood, in the upper part of Bloomfield, is the property known as Silver Springs, where, it is said, an abundant supply of water could be obtained. The erection of a pumping station, it is estimated, would cost, $14,000. Many citizens favor public ownership of the entire water plant. The matter of purchasing the mains and hydrants has been referred to the water committee for investigation and report.

PATERSON, N. J.—The High Mountain Water Co. was incorporated Jan. 25; capital stock, $50,000, of which $20,000 is paid in. The company will build a big reservoir back of the High Mountains. The incorporators are: William H. Belcher, William Buschmann and William Buschmann, Jr.

PERTH AMBOY, N. J.—Geo. W. Eggert, Supt., has been instructed by the aldermen to prepare specifications for a compound condensing duplex pumping engine of 4,000,000 gallons capacity, and also to ask for bids for furnishing and erecting it at the Runyon pumping station. Ch. Pump. Engr., O. A. Burns.

VINELAND, N. J.—It is stated that an election will soon be held to vote on the question of purchasing the works of the Vineland Water-Works Co. for $127,000. Improvements to the works will cost about $36,000. In November Alex. Potter, 137 Broadway, New York, prepared plans for the improvements or for new works to cost $82,000, noted in our issue of Nov. 25.

BEDFORD, PA.—At the election in February the question of issuing $16,500 in bonds for a new storage reservoir will be voted upon.

BRADDOCK, PA.—Bids will soon be asked for constructing a 12,000,000-gallon reservoir in North Braddock, according to reports. Estimated cost, $100,000. Wm. Howatt, Supt. Pub. Wks.

ERIE, PA.—Bids are asked by the commissioners until Feb. 23 for furnishing a 3,000,000-gallon pumping engine, as stated in our advertising columns. Wm. Himrod, Secy.

KITTANNING, PA.—The Rayburn Water Co. has been incorporated with a capital stock of $1,000 by J. S. Smith, Treas.; R. A. Hileman, R. A. McCullough and Harry A. Smith, of Kittanning. At present the place is supplied by the Kittanning Water Co.

WEST NEWTON, PA.—The West Newton Water Co. has been incorporated with a capital stock of $1,200 by J. S. Jones, Treas.; John M. Logue and Wm. Guiter, of Belle-

Vernon, Pa. A plant owned by Weddle & Sutton and the Robbstown Water Co., noted in our issue of Dec. 16, supplies this place with water.

SEAFORD, DEL.—Philadelphia parties are seeking a franchise for supplying this town with water, according to reports.

FREDERICK, MD.—It is reported that a bill is before the legislature authorizing Mayor H. K. Yeakle and the aldermen to issue $35,000 in bonds for the proposed increased water supply. Population, about 10,000.

TAZEWELL, VA.—The legislature is reported to have granted the council authority to issue bonds for new works. The city now has works built in 1886 at a cost of about $5,000. Population, about 1,500.

ELKINS, W. VA.—G. W. Harrison, Jr., writes us that the election on the water question called for Jan. 25, as noted in our issue of last week, has been postponed until Jan. 31. Estimated cost, $30,000. Address for further information Mayor J. H. Fout.

WILLIAMSTOWN, W. VA.—F. R. Porter, Chas. Dowling and A. Richter are reported to have secured a franchise for works in this place. A compressed air system will be used.

LENOIR, N. C.—J. W. Widby, Mayor, writes us that no steps have yet been taken in regard to the proposed work, nor are any likely to be taken for some time. Population, 1,060.

GREENWOOD, S. C.—Nisbet Wingfield, Norcross Bldg., Atlanta, Ga., is reported to have submitted a report on the proposed works for which $40,000 of 6% water and light bonds were sold in December. R. M. Hayes, Chn. Com.

BRUNSWICK, GA.—The works of the Brunswick Light & Water Co. will be sold at auction Feb. 26. Alex. Proudfit and W. E. Burbage, Water Comrs.

MONTGOMERY, ALA.—The council is reported to have directed that plans and specifications for municipal works be prepared, and that the Mayor negotiate for the sale of bonds for the works. For further information see our issues of Jan. 13 and 20 and the 1897 "Manual of Am. Water-Works." Mayor, J. H. Clisby; Consult. Engr., Nisbet Wingfield, 414 Norcross Bldg., Atlanta, Ga. Aldermen Joseph, Wiley, Roman and Fleming may be addressed.

TALLADEGA, ALA.—The council is reported to have passed a resolution directing the Talladega Light & Water Co. to improve its supply. Work must be begun within 60 days from Jan. 15, and be completed in six months. Supt., T. L. Bellengrath.

DAYTON, TENN.—Geo. W. Pearsall, Harriman, Tenn., is reported as making surveys, etc., for the proposed works to cost about $50,000.

GALLATIN, TENN.—J. W. Blackmore writes us that the council has not yet submitted the question of constructing works to a vote of the people, nor is it known when it will be submitted; estimated cost, $33,000.

MARTIN, TENN.—This place has applied for authority to issue bonds for works and a light plant; estimated cost, $25,000. E. E. Davis, Consult, Engr., Newbern, Tenn.; J. E. Kennedy, Mayor.

ROGERSVILLE, TENN.—H. J. Nelson, Mayor, writes us that although the proposition for works and a light plant have been rejected, the town wishes to grant a franchise.

TULLAHOMA, TENN.—Geo. W. Davidson, Recdr., writes us that the question of works has been laid over for the action of the next board of aldermen, the term of the present board expiring Feb. 14. The supply will be secured from a spring. Population, 2,500.

WINCHESTER, TENN.—Estimates, etc., for the proposed works to be built this season are reported as being prepared.

GEORGETOWN, KY.—N. H. Sinclair, Mayor, writes us that the city hopes to some time purchase the works of the Georgetown Water Co. The $30,000 in bonds voted in November for building works were illegal.

LOUISVILLE, KY.—Local papers state that Chas. Hermany, Supt. Louisville Water Co., will soon complete plans and specifications for the proposed filter, after which bids will be asked.

CANTON, O.—The city engineer has been instructed to make surveys and plans for the extension of the water-works race. L. E. Chapin, Cy. Engr.

CHICAGO, O.—Bids are asked until Jan. 27 for the purchase of $25,000 of bonds for the proposed works. The supply will be secured from wells. L. C. Hess, Mayor, writes us that the contract for constructing the works has not yet been let. Population, 2,800. Des. Engr., Chas. F. Sturdevant, Keosauqua, Ia., and 623 North Main St., St. Louis, Mo. Louis Simmermacher, Clk.

CONNEAUT, O.—In our issue of Jan. 13 we stated that the Conneaut Water-Works & Supply Co. would make improvements to its works. H. De C. Richards, Gen. Mgr., 123 Liberty St., New York, N. Y., writes us that the company is not making any extensions, but only overhauling the well system, repairing the pumps and boilers and putting in a lake intake.

LANCASTER, O.—Bids are asked until Feb. 1 for constructing a reservoir, furnishing and laying the pipe, etc., according to reports. Estimated cost, $10,000. Pres. Comrs., J. B. Orman; Secy., L. J. Snyder.

NORWALK, O.—Plans and estimates for the proposed pumping station, to cost $15,000, and the stand-pipe, to cost $10,000, have been completed. The station will be 90 × 60 ft. and will have three pumps and boilers. The stand-pipe will be 100 × 25 ft. and will have a capacity of 370,000 gallons of water. It is probable that the pump at the old works will be sold and a new 3,000,000 gallon pump erected there. Consult. Engr., L. E. Chapin, Canton, O.; Secy. and Supt., A. F. Rowland.

SYCAMORE, O.—R. S. Galleher, Mayor, writes us that this place voted Jan. 17 to issue bonds for works and a light plant to cost about $20,000. The bonds will be sold as soon as possible so work may be begun early in the spring. Population, 1,000. Des. Engr., Burton J. Ashley, Opera House Block, Chicago.

WELLINGTON, O.—An election is reported to have been called for Jan. 29 to vote on the question of issuing $30,000 in bonds for works and a light plant. G. L. Couch, Mayor.

LOWELL, IND.—We are informed that this place proposes to construct works in the near future; estimated cost, $15,000.

WINCHESTER, IND.—An election is reported to have been called for Feb. 18 to vote on the question of constructing works. Population, about 5,000.

ALMONT, MICH.—Press reports state that the question of issuing bonds for a better water supply will be voted on at the election this spring.

PEORIA, ILL.—The plant of the Peoria Water Co. was sold Jan. 14 to John S. Stevens for $1,500,000 for the eastern bondholders. For further information see 1897 "Manual of Am. Water-Works."

DUBUQUE, IA.—Local papers state that the question of the municipal ownership of the works of the Dubuque Water Co. will probably be submitted to the people at the election in April. The plan is to buy the present system from the estate of the late Selah Chamberlain, of Cleveland, O., and construct a supplemental one for fire and boiler purposes.

FONDA, IA.—R. F. Beswick, Chn. Water Com., writes us that the council wants to purchase about 4,000 ft. of 4 and 6-in. cast-iron water pipe and special castings. There is $2,000 cash in the water fund and the balance of the amount will be ready not later than May 1. Population, 1,200. F. W. Swearingen, Mayor.

LAMONI, IA.—The question of building works is reported as being considered.

SIOUX CITY, IA.—Phil. Carlin, Supt. Water-Works, has recommended the purchase of a 3,000,000-gallon pump at a cost of about $23,000. Mayor Cleland and Alderman Westcott may be addressed.

DULUTH, MINN.—Our correspondent informs us that by the purchase of the plant of the Duluth Gas & Water Co., noted in our issue of last week, the city will probably do considerable work on it during the summer.

HELENA, MONT.—Bids are asked until Feb. 24 for laying 1,010 ft. of either 4 or 6-in. water pipe, etc., in connection with the development of the springs on the military reservation at Fort Harrison. Maj. F. B. Jones, Q. M., U. S. A., Helena.

NEODESHA, KAN.—A. L. Hill, Cy. Clk., writes us that this city voted Jan. 17 to issue $15,000 in bonds for works. Engr., J. M. Walker, Coffeyville, Kan.

CLAYTON, MO.—David H. MacAdam, Kirkwood, Mo., and Chas. Shaw, Philadelphia, have applied for franchise to furnish this place with water from the St. Louis supply.

INDEPENDENCE, MO.—At the coming election this city will again have an opportunity to vote on the question of municipal works.

MARCELINE, MO.—Arrangements have been made with H. V. Hinckley, Consult Engr., Topeka, Kan., to make a complete report upon the water supply and works for this city.

MENA, ARK.—This place will probably construct works this season, according to reports. Estimated cost, $7,000.

PORT LAVACA, TEX.—A. W. Parham, Chn. County Comrs., writes us that this place not being incorporated does not propose to build works, as was recently reported.

LITTLETON, COLO.—The board of trustees have passed an ordinance to construct a gravity plant. There will be required 5, 6 and 8-in. pipe, 19 hydrants, etc. Population, about 1,000. J. A. Hamer, Town Recdr.; C. G. Barclay, Mayor.

BAKER CITY, ORE.—The question of constructing a reservoir of 75,000,000-gallons capacity, at a cost of about $7,768, is being considered. Supt., O. C. Stern.

BERKELEY, CAL.—A special election will soon be held to vote on question of issuing bonds for works. The board of trustees will submit two bonding propositions. One provides for the construction of two reservoirs and necessary mains for the city, the water being furnished by the Dingee Water Co., Oakland, Cal., and the other proposition provides for the establishment of complete works to be owned by the city. Cost of reservoirs is estimated at from $8,000 to $10,000 each.

COLTON, CAL.—Bids are asked until Jan. 31 for furnishing two pumps, electrical machinery, water pipe, etc., according to reports. D. Johnson, Clk.

ELSINORE, CAL.—J. M. Gardner, Los Angeles, Cal., is reported to have been awarded the contract for constructing works to cost about $20,000.

RED BLUFF, CAL.—An election will be held Feb. 12 to vote on the question of issuing $62,500 in 4% bonds for municipal works. W. L. Bransford, Pres. Trustees; J. T. Teass, Cy. Clk.

PLEASANTON, CAL.—J. A. Bilz is reported to have submitted a proposition to furnish this town with water. W. J. Dingee recently submitted a similar proposition. Population, 1,200.

SALINAS, CAL.—Supt. Waters has begun to prospect at the factory for six artesian wells. These will be 4 ft. in diameter and will be about 186 ft. deep.

BARRIE, ONT.—I. M. Wells, Mayor, writes us that the city will buy the works of the Barrie Water-Works Co. after valuation has been placed on it by the arbitration committee. Population, 8,000.

MOUNT FOREST, ONT.—This place is reported to have voted to construct works at a cost of about $25,500, bids for which were received Jan. 17, as noted in our issue of Jan. 13. J. P. Noonan, Chn. Com.

HINTONBURGH, ONT.—E. J. Rainboth and the Little Chandiere Water-Works Co. have applied for franchises for works. W. Hutchinson and G. P. Brophy are reported as interested in a scheme to furnish this place and Ottawa East with water. The council is said to have engaged an expert to report on the propositions.

WATERLOO, ONT.—The Waterloo Water-Works Co., it is reported, will build works. Population, about 3,200.

IRRIGATION.

DENVER, COLO.—A correspondent sends us the following regarding the commencement of operations on a reservoir and dam on the south fork of the South Platte River, about 40 miles from this city. The growing demand for cheaper power for manufacturing purposes led to the organization of the South Platte Canal & Reservoir Co. some five years ago, and after expending large sums of money the company has at last succeeded in securing the only practicable reservoir site on the South Platte River. The work of perfecting plans for a complete 17,000-HP. electric plant has been placed in the hands of C. P. Allen, Ch. Engr., Denver Union Water Co., Denver. A large portion of the plan has been completed, and engineers are now making a permanent location for the conduit down the Platte Canyon. It is expected that the plans will be completed and contracts let by Feb. 15. On account of the very great fluctuations in the flow of the Platte River, at various seasons of the year, it has been decided by prominent hydraulic engineers that it will be necessary to construct a storage reservoir with a capacity of 3,000,000,000 cu. ft. The site owned by this company is the only one of this size on the river and seems to be the key to a successful power enterprise, particularly as there will be connected with it some of the best and oldest water rights on the stream. This project was illustrated in our issue of Feb. 25, 1897.

YUMA, ARIZ.—The Yuma Union Land & Water Co. has been incorporated by the farmers of this place, to construct a canal 12 miles long, heading at West Yuma, and to pump water from the Colorado River to irrigate, for agricultural purposes.

MONROVIA, CAL.—Reports state that the board of directors of the Duarte Mutual Irrigation & Canal Co. have been instructed by the stockholders to proceed with the construction of a 2,000,000-gallon reservoir, on site between the Bliss and Young ranches. The land is large enough for three reservoirs, but only one will be built at present; the others will be built as needed.

SAN BERNARDINO, CAL.—C. DeWitt Chapman and C. P. Mallory have secured a claim to 500 ins. of water in a canyon running in a westerly direction from the northwest slope of the Bold Hills. The water is to be diverted to Horsethief Canyon, and there utilized to work the Sunset placer mine and adjacent claims.—H. H. Sinclair, Mgr. Southern California Power Co., of Redlands, Cal., has secured 4,000 ins. of Mill Creek, to develop power for generating electricity and compressed air, by means of dams, flumes, ditches and pipe lines.

RIVERSIDE, CAL.—The Southern California Reservoir Co., recently incorporated, has for its object the construction of canals, development of water, electric power, etc. It will bring electricity to the colony of Lake View, there to be used on pumping and development of water for irrigating purposes. It is proposed by Frank Brown, interested, to build a steel dam at the junction of the Santa Ana River and Bear Creek.

SEWERAGE.

LISBON FALLS, ME.—The question of constructing sewers in several streets is being discussed.

MIDDLEBURY, VT.—The committee has been instructed to complete the system on the west side and to consider if it is advisable to build sewers in three or four streets on the east side. C. E. Pinney, E. H. Martin, W. H. Thomas and F. H. Butler are on the board or trustees. Engr., A. R. Dow, Burlington, Vt.

SOUTHBRIDGE, MASS.—Frank L. Fuller, 12 Pearl St., Boston, has completed plans for the proposed system. The disposal will probably be by gravity upon filtration areas.

DERBY, CONN.—E. Sheppard Gordy, of the committee, writes us that the committee is preparing a report for a system, to be recommended to a city meeting Jan. 27. It is not known how much of the system will be built this year.

BUFFALO, N. Y.—Andrew Beaser submitted the lowest bid for a sewer in Hickory St., at $12,000; John Munro's was the lowest for a sewer in Harriet St., at $1,530, and John Ritzman for a sewer in Hickman Ave., at $1,493.

SHARON SPRINGS, N. Y.—C. M. Mallett, Village Clk., writes us that, with the exception of an extension of 1,400 ft., the system will be completed. This extension will be built this spring.

BAYONNE, N. J.—Emmett Smith, Cy. Engr., writes us that brick and pipe sewers to cost about $25,000 will be contracted for within 30 days. Thos. Moquer, St. Comr.

BRIDGETON, N. J.—Plans for the proposed system have been submitted to the council; estimated cost, $80,000. Alex. Potter, New York, was in November engaged to prepare the plans.

VINELAND, N. J.—The question of issuing bonds for a system and an electric light plant will probably be voted upon at the coming election. In November Alex. Potter, 137 Broadway, New York, completed plans for these improvements.

PITTSBURG, PA.—Bids are asked until Jan. 29 for constructing about two miles of 81 to 36-in. brick and about 4½ miles of 24 to 12-in. pipe sewers in a number of streets; estimated cost, $160,000. Edward M. Higelow, Dir. Dept. Pub. Wks.

GOLDSBORO, N. C.—J. H. Hill, Mayor, writes us that a survey for a system is being made. It has not been decided whether to submit the question to a vote or not. It is hoped to have a part of the system put in at once. Nothing definite can be given until the survey is completed. Des. Engrs., Lewis & Price, Goldsboro; Chn. Com., F. K. Borden.

ATLANTA, GA.—Bids are asked until Feb. 7 for constructing such brick and pipe sewers and for furnishing such sewer castings as may be required during the year. R. M. Clayton, Cy. Engr.; D. G. Wylie, Comr Pub. Wks.

LOUISVILLE, KY.—Bids are asked until Jan. 28 for constructing sewers in two streets. Chas. F. Grainger, Bd. Pub. Wks.; Thos. P. Craig, Secy.

BELLEFONTAINE, O.—Robt. Lamb, Chn., writes us that the committee has been appointed to examine systems and do other preliminary work for a proposed system for this place. No steps have been taken as yet towards securing plans or appropriating money.

CINCINNATI, O.—Wilson & Strack have been awarded the contract for constructing sewers in Garfield Ave. and Boldface Road, at $27,215.

COLUMBUS, O.—Local papers state that John W. Alvord, 1140 The Rookery, Chicago, Ill., has been engaged to devise a system of sewerage and sewage disposal for the entire city.

GALLIPOLIS, O.—The state board of health is reported to have approved the plans for a system for the state hospital.

NORWOOD, O.—Bids are asked until Feb. 12 for constructing sewers in Montgomery Pike. Jas. A. Stewart, Village Engr.; W. E. Wichgar, Clk.

SALEM, O.—Bids are asked by the city clerk until Feb. 2 for constructing 1,350 ft. of 18-in. and 850 ft. of 8-in. pipe sewers, according to reports.

TOLEDO, O.—The council has decided to construct a new district sewer from 16th St. to the river, to relieve the one in Jackson St. L. P. Harris, Cy. Clk.

TOLEDO, O.—The state board of health is reported to have returned without action the plans for a sewage disposal system for this city.

TORONTO, O.—The question of constructing a system is being considered, according to reports.

DENNISON, O.—The following bids were received by the council Jan. 18 for constructing a 24-in. pipe sewer in Second St. G. F. Hammond, $2,413; A. J. McLandsborough, $2,851; O. R. Hines, Scio, O., $3,000; W. C. Hartford, New Philadelphia, O., $2,598.

CRAWFORDSVILLE, IND.—F. Hoffman, Cy. Engr., writes us that the construction of five miles of 18 to 10-in. pipe sewers is being considered; average cut, 8 ft.; estimated cost, $20,000. No steps of importance have yet been taken.

RICHMOND, IND.—The city will sell $5,000 worth of improvement bonds at private sale in about 30 days. Jos. H. Winder, Cy. Clk.

PEORIA, ILL.—The board of local improvements is reported to have changed the plans for a 3-ft. brick sewer in District No. 1 to a 6-ft. sewer to cost about $75,000.

QUINCY, ILL.—It is proposed to construct a storm sewer 2,000 ft. long at a cost of about $8,000.

MILWAUKEE, WIS.—Local papers state that the council has adopted a resolution offered by Ald. Dietrich, instructing the city attorney to submit an ordinance at the next meeting of the council authorizing the issue of $100,000 in bonds to bear the date of Jan. 1, 1898, to be known as West Side Sewerage bonds, the proceeds to be used in the construction of sewers in the west sewer district.

ST. PAUL, MINN.—**The city engineer has submitted estimates and specifications to the board of public works for a sewer to cost $6,068; average cut 16 to 20 ft.**

COLUMBUS, NEB.—**L. F. Gottschalk, Cy. Surv., writes us that the construction of a small system is being considered; but thus far no definite action has been decided upon.**

BROOKFIELD, MO.—**The construction of a system is proposed, according to reports. G. S. Wilbur, Pres. Council.**

SPRINGFIELD, MO.—**Bids are asked until Feb. 1 for constructing 800 ft. of 8-in. pipe sewers. B. S. Bartlett, Mayor, writes us that it is proposed to construct about 10,000 ft. more later in the year. T. A. White, Cy. Engr.**

ST. LOUIS, MO.—**It is proposed to construct a sewer in Clarendon Ave. at a cost of $27,000.**

LA JUNTA, COLO.—**This town has employed F. T. Lewis, Room 2 Central Block, La Junta, to prepare plans for a system. The plans will be completed about Feb. 1, after which bids will be asked.**

TACOMA, WASH.—**F. L. Davis, Cy. Engr., writes us that the system will not be extended this year, as was recently reported.**

MONTREAL, QUE.—**It is proposed to construct a main sewer in St. Denis ward. Councilman Prefontaine may be addressed.**

GUADALAJARA, MEX.—**Press reports state ex-State Senator L. E. Miller, Cape May, N. J., will spend about $4,000,000 on the proposed system for this city.**

GARBAGE DISPOSAL—STREET CLEANING

MOUNT VERNON, N. Y.—**Bids are asked until Feb. 1 for removing ashes, garbage, etc., in this city, for a period of two years, ending Feb. 1, 1900. Wm. N. Hoyt, Cy. Clk.**

COUNCIL BLUFFS, IA.—**Bids are asked until Jan. 31 for removing garbage, refuse, dead animals, etc. N. C. Phillips, Cy. Clk.**

STREETS AND ROADS.

MANCHESTER, N. H.—Dudley & Doherty, Engrs., Manchester, have completed their survey for an ocean boulevard to Rye Harbor, N. H., a distance of 12 miles.

BUFFALO, N. Y.—Bids are asked by the park commissioners until Feb. 10 for constructing a roadway in the Southside Parkway, from Downing St. to White Corner's road. Geo. H. Selkirk, Secy.

MOUNT VERNON, N. Y.—**Bids are asked until Feb. 15 for grading, macadamizing, etc., North 10th Ave., from Lincoln Ave. to Stevens Ave., and Sidney Ave., from Clermont to Summit Ave. A petition has been presented to the council for macadamizing, etc., in North Columbus Ave., from Sagemans Corners to Corcoran Manor, in South Columbus Ave., from East Third St. to South Third Ave., and in South Third Ave. to Kingsbridge Road. Wm. N. Hoyt, Cy. Clk.**

GLOUCESTER CITY, N. J.—The street committee has reported that there is 98,660 sq. yds. of paving to be done in this city at a cost of $69,000 with rubble stone, or $177,000 with vitrified brick.

MAY'S LANDING, N. J.—Bids will soon be asked for constructing a new gravel road from this town to Egg Harbor, a distance of 7 miles. Address Geo. Barton, Director Bd. Freeholders; J. J. Albertson, Engr.-in-Charge, Magnolia, N. J.

WOODBURY, N. J.—Bids are soon to be asked for the construction of the proposed stone highway, from Paulsboro to Swedesboro. Chas. W. Starr, Director Bd. Freeholders, may be addressed. J. J. Albertson, Engr.-in-Charge, Magnolia, N. J.

CLIFTON, PA.—**The council has passed an ordinance** to submit the question of issuing of $17,500 in bonds to a vote at the next election for street improvements and a borough hall.

ERIE, PA.—**Reports state that Benj. E. Briggs, Cy. Engr., has been instructed to prepare plans for the proposed paving in State St.**

HAZLETON, PA.—**Bids are asked until Feb. 4 for laying** 18,000 sq.yds. of brick paving,excavating 6,000 cu.yds. and setting 500 ft. of stone curbing, as stated in our advertising columns. **A. Brooks Cellax, Cy. Engr.**

WILKES-BARRE, PA.—A scheme is reported as proposed by A. S. Orr and others, to issue $100,000 in stock for the construction of a boulevard through Dallis to Harvey's Lake.

KINGWOOD, W. VA.—J. Slidell Brown, Recdr., writes us that 5,000 lin. ft. of bluestone sidewalks 6 ft. wide will be laid at an estimated cost of $5,000 the coming summer.

MACON, GA.—**Bids are asked until Jan. 31 for paving 2,430 sq. yds. with granite blocks, grading, filling, etc., in Ocmulgee St., from Fourth St. to Fifth St. Wm. Lee Ellis, Chn. Bd. Pub. Wks.**

NEWPORT, KY.—**The question of paving Third St. with brick between the two bridges that cross the Ohio River will be taken up by the council in February.——For 1898 the city proposes to continue extensively the system of combined concrete curb and gutters, which is proving very successful in lieu of paved gutters on the macadam streets. The cost for 6-in. curb 6 × 15-in. gutter has averaged from 61 to 70 cts. per lin. foot. W. L. Glazier, Cy. Engr.**

CANTON, O.—**Bids are asked by the city clerk until** Feb. 5 for sidewalk brick. The following streets will be paved this year: **West, Lake, West Tenth, South Cherry and East Eighth, with vitrified brick. East Seventh will be improved by lawning, curbing and flagging, and Mahoning by macadamizing.**

CINCINNATI, O.—**A proposition will be presented to the legislature by Ralph Peters to authorize the issue of bonds for asphalt paving, extending and widening to 120 ft. the Grandin Road as far as Linwood, and also to lay out a number of small parks and plots along the boulevard, according to reports. Aug. Herrmann, Pres. Bd. Administration.**

CLEVELAND, O.—**The council has passed resolutions to have Julia St. improved by brick paving, grading, draining, etc., from Sawtell Ave. to Willson Ave. Howard H. Burgess, Cy. Clk.——Reports state that E. C. & C. E. Doolittle recently submitted the lowest bid, at $15,000, for the Warner Road improvements.**

HAMILTON, O.—**It is reported that the board of public works has resolved to pave North Front St., from High St. to Hydraulic St., according to the following estimates, by L. A. Dillon, Cy. Engr.: Vitrified brick, $1,521; sheet asphalt, $2,393; block asphalt, $2,269.**

LIMA, O.—**We are informed that bids will be asked in March for paving Main St., which is 50 ft. wide, with brick for a distance of 1¼ miles on 6-in. concrete foundation; estimated cost, about $50,000. There will be more streets paved later in the season. Dexter Chapin, Chn. Street Com.**

NORWOOD, O.—**Bids are asked until Feb. 12 for grading, macadamizing, etc., Montgomery Pike, from Ivanhoe Ave. to Mound Ave. James A. Stewart, Cy. Engr.; W. E. Wichgar, Clk.**

BEDFORD, IND.—We are informed that Amos Musselman & Co., Anderson, Ind., was awarded the contract Jan. 18, at $32,675, for constructing 22 miles of road in Spice Valley Township. John B. Malott, County Audr.

INDIANAPOLIS, IND.—The board of public works is reported to have recommended the construction and operation of an asphalt plant by the city in order to prepare for taking care of 26 miles of improved streets on which the guarantee will soon expire. In a short time 100 improved streets and 15 alleys will have to be paved with rock asphalt.

SPRINGFIELD, MO.—We are informed that the contract for paving 30,000 sq. yds. of asphalt, brick and macadam will be let about Feb. 1. T. A. White, Cy. Engr.

HOUSTON, TEX.—**Bids are asked until Jan. 31 for paving with asphalt, brick or macadam and curbing in the following streets: Caroline St., 5,020 sq. yds. pavement, 2,810 lin. ft. of curbing; Crawford St., 11,800 sq. yds. pavement, 6,900 lin. ft. curbing, and Buffalo St., 6,934 sq. yds. pavement, 4,800 lin. ft. curbing. L. A. Gueringer, Cy. Engr.; H. B. Rice, Mayor.**

DENVER, COLO.—Press reports state that a petition was presented to the board of public works Jan. 14 for the paving of Logan Ave., from Colfax to Eighth Ave., with gneiss, from Sherman mountain, Wyoming, at a cost of not more that $1 a sq. yd., exclusive of curbing.

TACOMA, WASH.—Frank L. Davis, Cy. Engr., writes us that the contract will be let Feb. 1 for 2,140 sq. yds. of brick paving, at an estimated cost of $5,600, which includes curbing, draining, etc.

OAKLAND, CAL.—Reports state that the council passed resolutions, Jan. 13, for macadamizing portions of Third St., East 18th St. and Eighth St. J. W. Tompkins, Cy. Clk.

SAN FRANCISCO, CAL.—Local papers state that the Polk St. Improvement Club has appointed John E. Quinn, Nathan Bibo and L. H. Kohn as a committee to advance the improvement of roads.——The Cortland Ave. Improvement Club has been organized by Carl Thornberg, Pres.; J. Johansen, Vice-Pres.; M. Bogue, Secy.; H. A. Magendie, M. Ahlgren, M. C. Ferguson and F. Newbert, to extend Folsom St. over Bernal Heights.

MANUFACTURING PLANTS.

BROOKLYN, N. Y.—A fire in this borough, Jan. 24, destroyed the licorice factory of Edward J. Scudder & Co., 106 to 114 John St., causing a reported loss of $150,000.

NEWARK, N. J.—It is reported that the Western Electrical Co., of Newark, N. J., will probably erect a large power house and several factory buildings near Waverly Station on the Pennsylvania R. R. in the spring.

PATERSON, N. J.—The works of the Atherton Machine Co. were destroyed by fire Jan. 20, causing a reported loss of $10,000.

ALLEGHENY, PA.—The Pennsylvania Car Wheel Co., which was recently organized with a capital stock of $100,000, will erect a plant on Preble Ave., at a reported cost of $40,000, including machinery and equipment. About 250 men will be employed at first, and it is expected to turn out 500 car wheels a day. Pres., Joshua Rhodes; Supt. A. W. Slocum.

NEW KENSINGTON, PA.—M. B. Gengst has been awarded the contract for the construction of the German Plate Glass Works, at about $20,000. Work is expected to begin this week and to be completed by Sept. 1.

PITTSBURG, PA.—The Riter & Conley Co., of Pittsburg, is said to have received the contract for building a steel addition, 900x104 ft., for the Pennsylvania Tube Works.

ST. AUGUSTINE, FLA.—Thos. P. Alston, P. O. box 675, informs us that he is in the market for brick and tile making machinery, and would like all information possible with regard to the same.

FLORENCE, ALA.—J. C. Rea & Co., Columbia, Tenn., inform us that the building and the boiler room of their new flour mills in Florence are already built, and that it is expected to occupy the same by March 1. Everything has been bought except the milling machinery, and figures on this will be received in February. The machinery is estimated to cost $4,500.

HAMILTON, O.—The Columbus Bridge Co., Columbus, O., is reported as having been awarded the contract for the construction of the plant of the Hoover, Owens & Rentschler Co., at this place, to cost about $60,000.

CHICAGO, ILL.—It is reported that the Illinois Steel Co. will erect at once a slab mill at South Chicago, as an addition to its present plant, at a cost of about $400,000.

SAN ANTONIO, TEX.—Reports state that the San Antonio & Aransas Pass Ry. Co. will erect a machine shop, 140x70 ft., and a boiler shop, 100x70 ft. M. D. Monserrate, Gen. Mgr., San Antonio.

PORTLAND, ORE.—A new foundry building will be erected in this city by Messrs. Heintz Bros.

GAS PLANTS.

QUINCY, MICH.—The Coldwater Gas Co., Coldwater, Mich., will extend its mains to this town, a distance of six miles. W. A. Coombs, Pres.

NEODESHA, KAN.—This place voted Jan. 17 to issue $15,000 in bonds for a natural gas plant. A. L. Hill, Cy. Clk.

BOLTON, ENGLAND.—The town council, according to reports, is considering the question of borrowing $500,000 for installing new gas holders, mains, retorts, purifying apparatus, etc.

NEW COMPANIES.—Long Beach Oil Co., Sistersville, W. Va.; $10,000; Geo. A. Shryock and others.

The Rose Oil & Gas Co., Findlay, O.; $500,000, with $100 paid in; C. B. Angell, Chas. L. Jukes, T. W. Karg, Findlay; E. E. Gilsey, Columbus; Wm. L. Perkins, Cincinnati.

Eastern Oil Co., San Francisco, Cal.; $50,000; W. A. Bradford, E. L. Phillips, E. D. Lampson, San Francisco.

Norristown Gas Co., Norristown, Pa.; $1,000; to manufacture gas for heat and power purposes; Albert T. Bauerle, 701 Drexel Bldg.; Owen J. Roberts, Chas. F. Da Costa, Philadelphia; John H. Minds, Ramsey, Pa.

MISCELLANEOUS CONTRACTS.

DREDGING.—Stockton, Cal.—**A petition has been presented to the council, according to reports, for dredging Mormon Channel, from Center St. to Lincoln St.**

TUNNEL.—West Newton, Pa.—It is reported that a tunnel under the Youghiogheny River, at West Newton, will be constructed in the spring by Osborne, Saeger & Co.

PIER AND BOOM.—Mount Vernon, Wash.—**Bids are asked until Jan. 31 for constructing a pier and sheer boom, according to reports. Henry Gay, County Surv.**

TUNNEL.—San Diego, Cal.—Bids are asked by the board of supervisors until Feb. 9 for the construction of a tunnel through the divide at the head of Poway grade.

STEEL TOW BOAT.—Memphis, Tenn.—Bids are asked until Feb. 21, for constructing a steel hull tow boat. Capt. H. C. Newcomer, U. S. Engr., Equitable Bldg., Memphis.

DRAINAGE.—Washington, D. C.—The reclamation of the flats along the eastern branch of the Potomac River in this city and the improvement of the branch is being discussed in Congress.

IMPROVING PARK.—Indianapolis, Ind.—Reports state that the legislature will petition the council to pass an ordinance for the issuance of $200,000 in bonds for improving the park lands.

DOCK.—St. Joseph, Mich.—It is reported that the Cleveland, Cincinnati, Chicago & St. Louis Ry. Co. will construct a dock extending for 1½ miles along the north side of the St. Joseph River.

DIKE.—Victoria, B. C.—Reports state that L. P. Paisley, of Chilliwack, B. C., has presented a proposal to the government for constructing a dike from Cheam Hill to Camp Slough, a distance of six miles.

ORE DOCKS.—Marquette, Mich.—A contract is reported to have been awarded to W. H. Gilbert, Norway, Mich., for reconstructing the ore docks destroyed by fire, which will require about 500,000 ft., B. M., of lumber.

STONE ARCH.—San Francisco, Cal.—Reports state that Mrs. Paul Breon will spend $25,000 in the erection of a granite arch at the Seventh Ave. entrance of Golden Gate Park to the memory of her husband and son.

TOOLS.—Chicago, Ill.—Reports state that the Walburn-Swenson Co., Monadnock Block, wishes to purchase a 40-in. planer, five lathes, ranging from 16 to 24 ins. and a 48-in. heavy boring mill, and a quantity of other machine tools.

CANAL.—Paris, France.—Press reports state that a proposition has been presented to the chamber of deputies to connect Paris with the sea by a canal at an estimated cost of about $40,000,000. It will be 115 ft. wide and 20 ft. deep.

DOCKS.—Newport News, Va.—Press reports state that plans are being prepared for a dock for the Old Dominion Land Co. It will have 32,000 sq. ft. of surface and a capacity of 8,000,000 lbs., and will be used for coastwise trade.

WHARF.—Santa Monica, Cal.—Press reports state that J. C. Elliott has made application for a franchise to construct a pleasure wharf at the foot of Railroad Ave., from 800 to 1,500 ft. long, at an estimated cost of from $8,000 to $40,000.

HOISTING ENGINE.—Savannah, Ga.—Bids are asked by the Marine Hospital Service, South Atlantic Quarantine Station, until Feb. 12, for installing a hoisting engine, sulphur furnace, appliances, etc. Taliaferro Clark, Asst. Surgeon, Savannah.

FILLING LOTS.—Albany, N. Y.—Bids are asked until Feb. 7 for filling vacant lots on the north side of Washington Ave. and in the block bounded by Washington Ave., Benson St., Quail St. and Ontario St.; surety, $5,000 Thos. J. Lanahan, Cy. Clk.

JETTIES AND SHORE PROTECTION.—Cleveland, O.—Bids are asked by the board of park commissioners until Feb. 9 for constructing jetties and shore protection in Edgewater Park, as stated in our advertising columns. C. W. Pratt, Jr., Ch. Engr. Bd.

REPAIRING PIER.—New York, N. Y.—Bids are asked until Feb. 4 for removing and replacing about 30,240 sq. ft. of deck and sheathing and about 576,961 ft., B. M., of yellow pine, for extending the pier at West 50th St. J. Sergeant Cram, Comr. Docks, Pier A.

PARK.—Albany, N. Y.—Local papers state that Assemblyman M'Ewan will present a bill for the appropriation of the land bounded by Swan, Dove, Canal and Elk Sts. for the laying out of a park, according to plans prepared by Horace Andrews, Cy. Engr.

PIER.—Cleveland, O.—The council has appropriated $30,000 and will probably soon advertise for bids, according to reports, for the construction of a pier at the foot of Erie St., to be 40 ft. wide and several hundred feet long, in the shape of an L, which will be used for passenger and merchandise. Councilman Steiner may be addressed.

WHARF.—Summerland, Cal.—Bids are asked for a franchise until April 4, for constructing a wharf extending into the Santa Barbara Channel with an extension having a width of 20 ft., constituting an elevated roadway through Carey Place, from the shore to the end of the wharf, according to reports. H. H. Doyle, Clk. County Supervisors.

DOCK AND RAILWAYS.—Workington, England.—It is reported that estimates for constructing the new dock, breakwater, pier, entrance channel and railways at this place have been submitted by Sir E. Leader Williams, Ship Canal Co., Manchester, and Thos. Meik & Sons, 21 York Place, Edinburg; estimated cost, about $1,747,085.

NAVAL SUPPLIES.—Mare Island, Cal.—Bids are asked by the navy department until Feb. 8, for furnishing 80 single and 40 double iron blocks, 900 lbs. of sheet brass springs, 3,500 lbs. of copper, 60 tons of pig iron, 1,600 lbs. of sheet lead, 17,000 lbs. of steel rivet rods and 11,000 steel blooms. Edwin Stewart, Paymaster-Gen., Washington, D. C.

BREAKWATER REPAIRS.—Cleveland, O.—Press reports state that the breakwater is in a dangerous condition and will have to be strengthened by guards from 1,000 to 2,000 ft. long, beginning 200 or 300 ft. from the breakwater and extending lakeward. Col. Jared A. Smith, U. S. Engr., has made an outline of the plan; estimated cost, from $350,000 to $700,000.

CHANNEL.—Sault Ste. Marie, Mich.—Reports state that vesselmen of the great lakes who are engaged in the Lake Superior traffic are considering the question of asking Congress to widen the West Neebish Channel, it having a width of but 300 ft., which is a great hindrance to vessels, or to dredge a new channel through the West Neebish Rapids. Jos. Ripley, U. S. Asst. Engr.

BULKHEAD, DREDGING, FILLING, ETC.—Ellis Island, N. Y. H.—We are informed that the following bids were received Jan. 19 for constructing a crib bulkhead and dredging and filling at the U. S. Immigration Station:

		Time.
Wm. H. Jenks, New York	$87,770	•250 days
Jas. C. McGuire, New York	71,989	•300 "
H. D. Steers, New York	61,895	•90 "
The Degnan-McLean Cons'tn Co, N.Y.	74,330	6 mos.
P. Sanford Ross, Jersey City, N. J.	74,000	9½ "
Warren Rosevelt, New York	61,047	120 days
Frank Rinchler & Co., Stapleton, S. I.	68,460	8 mos.
Spearin & Preston, New York	61,500	5 "
Jas. D. Leary, New York	72,980	6 "
Jno. Monks & Son, New York	73,459	90 days

•Working days.

CONTRACT PRICES.

RIP-RAP, ETC.—New York, N. Y.—The following bids were received by the department of docks and ferries, Jan. 21, for preparing for and repairing and extending the pier at the foot of West 129th St., North River:

Bidder.	2,600 cu. yds. rip-rap stone furnshd and placed.	Total.
Gildersleeve & Rolf, 39 Cortlandt St....	$0.45	$31,433
P. S. Ross, Jersey City, N. J.....	.50	34,000
A. R. Baird, New York	.55	47,484
J. W. Flaherty, 41 Peck Slip.	.50	49,738

PIER SUBSTRUCTURE.—Duluth, Minn.—The following bids were received by Maj. Clinton B. Sears, U. S. Engr., Duluth, Jan. 15, for building suostructure for south pier of ship canal entrance to harbor at Duluth, as advertised in Engineering News:

Bids Received at Duluth, Minn., Jan. 15, for Building a Pier Substructure.

Quantities.	Porter Bros., Duluth, Minn., $217,010.	J. L. Lipsett & R. Gregg, Sault Ste. Marie, Mich., $201,840.	Heldmaier & Neu, Chicago, Ill., $234,236.	Adolph Green, Green Bay, Wis., $207,057.	L. P. & J. A. Smith Co., Cleveland, O., $186,590.	P. McDonnell, Duluth, Minn., $184,540.	N. F. Hugo & F. P. Tims, Duluth, Minn., $179,972.	Carkin, Stickney & Cram, Detroit, Mich., $206,365.	McMullin & Morfh St. Paul, Minn., $184,300.	J. B. Donnelly, Buffalo, N. Y., $181,820.	King & Steele, Duluth, Minn., $170,780.	F. Campbell, Duluth, Minn., $212,630.	Barnett & Record Co., Minneapolis, Minn., $183,722.	Norris & Fitzgerald, Duluth, Minn., $246,710.	A. F. Chapman & Co., Buffalo, N. Y., $240,355.
Dredging trench for canal pier, protection pier, or piers.....72,000 cu. yds.	$0.12½	$0.10	$0.17	$0.12	$0.12	$0.15	$0.076	$0.15	$0.12	$0.095	$0.105	$0.125	$0.101	$0.15	$0.19
In accessory work, in place:															
Pine or hemlock timber, a M. ft..550,000 lin. ft..	17.70	16.00	18.00	15 50	15.00	18.00	18.00	16.50	15.50	16.00	15.65	18.00	16.50	18.00	18.00
Round piles, a lin. ft. .....16,000 " "	.12	.12	.16	.18	.15	.13	.11½	.15	.12	.10	.10	.14	.09½	.14	.25
Flattened piles .....30,000 " "	.13¾	.13	.18	.19	.18	.15	.12½	.20	.13	.12	.11	.14	.10½	.16	.25
Steel drift bolts, and spikes .....51,000 lbs.....	.02½	.01¾	.029	.02½	.03½	.02	.02	.03	.01¾	.02½	.0165	.02	.01½	.03	.03
Steel machine bolts .....15,000 "	.02½	.01¾	.03¾	.03½	.04½	.02	.02½	.04	.019	.03	.0181	.02	.0165	.03	.03½
Cast-iron washers .....5,000 "	.02¼	.01½	.02½	.02½	.03	.03	.01½	.02	.01¾	.02½	.0138	.02	.011	.03	.03
Rock filling, rip-rap, etc., in place.30,000 tons[1]...	.90	.90	.98	.95	1.00	.70	.95	1.50	1.10	1.10	.72	.90	.63	.61	2.50
Gravel filling, in place .....10,000 cu. yds.	.40	.20	.45	.50	.25	.30	.45	.40	.35	.29	.55	.50	.40	.40	.40
Excav. and deposited in stock pile.15,000 " "	.35	.20	.15	.45	.35	.10	.15	.30	.17	.25	.22	.30	.271	.28	.50
Timber in accessory works, etc.....20,000 ft. B.M.	8.00	10.00	17.50	10.00	20.00	4.00	10.00	12.00	10.00	7.50	6.00	8.00	9.50	36.00	20.00
Piles taken up and redriven..... 3,000 lin. ft..	.09	.08	.15	.14	.20	.07	.08	.15	.10	.11	.07	.07	.0633	.14	.35
Canal pier crbs, exclusv rock & grvl 1,722 " " 153,787	146,350	165,019	138,517	120,540	130,000	121,850	121,700	120,500	119,000	117,800	149,000	134,287	151,000	208,000	

[1] A ton of 2,000 lbs.

WATER PIPE AND CASTINGS.—Philadelphia, Pa.—Our correspondent informs us that Thos. M. Thompson, Dir. Pub. Wks., received the following bids Jan. 18, for furnishing water pipe and special castings; Gray's Ferry Foundry Co., Philadelphia, bid for large castings, $2.25 a lb.; breeches pipe, $3.125; turns, $3.00; the contract up to Jan. 24 had not been let:

Quantities.	Reading (Pa.) Foundry Co.	Camden Iron Works, Philadelphia, Pa.	McNeal Pipe & Foundry Co., Burlington, N. J.	Donaldson Iron Co., Emaus, Pa.
	ct.	ct.	ct.	ct.
6-in. pipe, a lb.15,000 lengths.	0.87	0.81	0.8169	0.83
8-in. " 1,000 "	.87	.81	.8169	.82
10-in. " 1,000 "	.87	.81	.8058	.82
12-in. " 2,000 "	.87	.81	.8058	.82
16-in. " 300 "	.87	.805	.8058	.82
20-in. " 1,200 "	.87	.805	.8058	.82
36-in. " 20 "	.87	.815	.8411	...
48-in. " 50 "	.87	.815	.8411	...
Small specials .400,000 lbs.....	$1.75	$1.85	$1.90	$1.50
Large specials .100,000 "	1.85	2.00	1.90	....
Breeches pipe	3.00	....	3.75	....
¼ turns, 20 to 48-in.	3.25	....	3.75	....

ROAD.—Swampscott, Mass.—We are informed that the following bids were received by the Massachusetts Highway Commission, 4 Mount Vernon St., Boston, Jan. 20, for constructing about 5,450 lin. ft. of road in this place; A. B. Fletcher, Secy.:

Bids Received at Swampscott, Mass., Jan. 20, for Constructing a Road.

Quantities.	Cashman Bros., Newburyport, (informal).	A. J. Wellington, Boston, Mass.	C. H. Kelleher, Newburyport, Mass.	Fred E. Ellis, Melrose, Mass.	J. J. H. Welch, Salem, Mass.	Tuttle & Edgerly, Swampscott, Mass.	Thos. Hurley, Lynn, Mass.	J. M. Parsons & Co., Salem, Mass.	Brono & Salomone, E. Boston (informal).	Boston Const'n Co., Boston (accepted).	Keene & Foster, Boston.	Newell & Snowlington Co., Upbridge, Mass.	Michael Pallant, Everett, Mass.	A. Saucier, So. Framingham, Mass.	J. Sheehan & Co., Lynn, Mass.	Col. Jos. & Hiram Co., Boston, Mass.
Excavation ..... 6,000 cu. yds.	$0.38	$0.40	$0.40	$0.75	$0.38	$0.35	$0.43	$0.38	$0.49	$0.30	$0.50	$0.36	$0.40	$0.275	$0.40	$0.60
Ledge excavation ..... 2,400 " "	1.35	1.25	1.50	1.10	1.35	.80	1.45	1.10	2.75	.82	1.65	1.50	1.00	1.35	1.50	1.15
Rubble masonry laid dry.... 181 " "	3.00	6.00	4.50	4.50	2.50	5.50	2.25	3.75	3.00	2.75	5.00	3.00	3.90	3.50	3.00	4.50
Laid in cement ..... 88 " "	4.00	12.00	6.00	7.00	5.00	6.00	4.50	5.50	5.00	4.00	11.00	6.00	4.10	6.00	6.00	5.50
Gravel ..... 3,000 " "	.45	.50	.60	.75	.60	.40	.58	.60	.75	.35	.75	.60	1.25	.70	.60	.80
Vitrified clay pipe ..... 900 lin. ft..	.45	.60	.50	.55	.50	.55	.50	.61	1.00	.65	.65	.45	.32	.50	.60	.45
Fencing used as guard rail. 775 " "	.22	.25	.15	.15	.15	.14	.23	.20	.17	.17	.17	.15	.45	.16	.15	.25
Side drains ..... 1,000 " "	...	.45	.35	.35	.30	.25	.45	.33	.25	.50	.40	.35	.25	.35	.25	.30
Finishing between limits.... Labor, hour.	.18	.20	.175	.20	.20	.22	.25	.20	.15	.16	.20	.20	.20	.20	.25	.17
D'ble teams.	.45	.50	.50	.50	.50	.50	.50	.50	.50	.45	.50	.50	.60	.50	.50	.50
Singl. teams.	.30	.35	.30	.35	.35	.35	.30	.35	.30	.30	.35	.30	.30	.35	.35	.35
Stone monuments ..... 24 each...	1.00	1.50	1.00	1.00	1.50	1.00	3.00	1.50		1.15	2.00	1.50	5.00	1.25	1.50	1.00
12-in. iron pipe ..... 60 lin. ft..	1.50	1.50	2.00	2.00	1.35	1.50	1.25	1.25	2.25	.50	1.50	2.00	1.00	1.25	2.00	1.35
18-in. " " ..... 72 " "	1.75	2.50	3.00	3.25	2.20	2.50	2.50	3.75	4.00	.65	2.75	3.25	4.00	1.85	3.00	2.50
8-in. vitrified clay pipe..... 750 " "	.30	.40	.40	.35	.35	.40	.45	.37	.75	30.00	.45	.38	.26	.40	.40	.35
Catchbasins ..... 3 each...	22.00	15.00	20.00	25.00	15.00	35.00	40.00	17.00	20.00	15.00	30.00	20.00	25.00	28.00	40.00	35.00
Brick inlets ..... 1.....	15.00	15.00	15.00	20.00	10.00	30.00	37.00	15.00	20.00	15.00	30.00	15.00	25.00	10.00	30.00	20.00
Total	$8,887	$10,892	$10,794	$12,517	$9,672	$8,326	$10,503	$9,641	$15,120	$7,349	$12,993	$10,252	$11,499	$9,708	$10,509	$11,630

BRIDGE PILING, ETC.—Omaha, Neb.—The park commissioners received the following bids Jan. 20, for constructing lagoon bridges and for the piling:

Bidder.	Total.	Piling a lin. ft.
Canton Bridge Co., Canton, O.	$9,350	$0.24
P. H. Mahoney, Omaha, Neb	9,764	.18
Van Court & Co., Omaha, Neb.....	9,950	Cedar .16 Oak, .18
Youngstown Bridge Co., Youngstown, O.	10,000	.15
Gillette-Herzog Mfg. Co., Minneapolis..	11,640	" .30
H. B. Mayo & Co., Omaha, Neb.	12,310	...
Geisell Const'n Co., St. Louis, Mo.....	13,300	" .35
Wrought Iron Bridge Co., Canton, O...	13,500	" .35
Wis. Bridge & Iron Co., Milwaukee...	13,970	" .35
Farnsworth & Blodgett, Kansas City...	14,600	" .30
C. E. H. Campbell, Council Bluffs, Ia...	17,000	...

DRIVES AND WALKS.—Omaha, Neb.—Van Court & Winn have submitted the lowest bids to the executive committee of the Trans-Mississippi Exposition for constructing drives and walks at 14.9 cts. a sq. yd. for 2 ins. of broken stone, covered with 1-in. of gravel, or 20 cts. a sq. yd. for 3 ins. of stone in the center and 2 ins. on the sides and covering the whole with 2 ins. of gravel.

BREAKWATER.—Agate Bay, Minn.—The following bids were received by Maj. Clinton B. Sears, U. S. Engr., at Duluth, Minn., for constructing a breakwater in the harbor of Agate Bay, Two Harbors, Minn., Jan. 20:

Bidder.	—300 lin. ft.— 1.	2.	Total.
Norris & Fitzgerald, Duluth, Minn...	$43.75	$16.75	$18,150
King & Steel, Duluth (accepted)....	37.20	13.80	15,300
Lipsett & Gregg, Saut Ste. Marie....	39.00	14.50	16,050
Frederick Davis, Duluth, Minn.....	42.90	12.00	16,470
Porter Bros., Duluth, Minn.....	39.20	14.00	15,960

1. Cribs and stone filling and underfilling and rip-rap in place, 18½ x 24 ft., a lin ft. 2. Superstructure, including stone filling, a lin. ft.

GRAVEL ROADS.—Mount Vernon, O.—P. B. Chase, Cy. Clk., informs us that S. B. Church, Mount Vernon, submitted the lowest bid for gravel road work, at 13.75 cts. a cu. yd. for grading, and 15 cts. a cu. yd. for gravelling.

PAVING.—Montgomery, Ala.—J. W. Persons, Cy. Engr., informs us that the following contracts were let recently for paving: Brick paving, 3,600 sq. yds., D. W. Ford & Co., Montgomery, $1.36 a sq. yd; brick paving, 5,500 sq. yds., J. H. Talbot & Co., Detroit, Mich., $1.37; granite block paving, 4,700 sq. yds., J. H. Talbott & Co., $1.87 a sq. yd. R. H. Somerville, Cy. Treas.

METERS.—Jacksonville, Fla.—R. N. Ellis, Supt. Water-Works, informs us that the following bids were received Jan. 18 for furnishing 200 ⅝-in. water meters: Piston meter—H. R. Worthington, New York, $2,395; Rotary piston meter (straight dial)—National Meter Co., New York, $2,400; Union Meter Co., Worcester, Mass., $2,290; Hersey Mfg. Co., Boston, Mass., $2,400; Rotary piston meter (round dial)—National Meter Co., $2,000; Hersey Mfg. Co., $2,200; Straight dial disc—National Meter Co., $1,800; Hersey Mfg. Co., $1,800; Thomson Meter Co., Brooklyn, N. Y., $1,800; Round dial disc—National Meter Co., $1,600; Neptune Meter Co., New York, $1,600; Buffalo Meter Co., Buffalo, N. Y., $1,200; Hersey Mfg. Co., $1,600; Pittsburg Water Meter Co., Pittsburg, Pa., $1,600; Thomson Meter Co., $1,660. The Florida Hardware Co., Jacksonville, was awarded the contract for furnishing galvanized wrought iron pipe fittings at $121.

INDUSTRIAL NOTES.

THE PITTSBURG BRIDGE CO., Pittsburg, Pa., has removed its Minneapolis office to St. Paul.

THE PREMIER STEEL CO., Indianapolis, Ind., through its Receiver, Mr. J. E. McGettigan, notifies us that the sale of its property, which was to have occurred Jan. 15, 1898, has been postponed until April 9, 1898, at which time all the property of the company will be sold.

THE ATLANTIC TRANSPORTATION CO. has increased its capital stock from $100,000 to $3,000,000, according to report. The company is incorporated in New Jersey and its officers are: Pres., Edw. P. Meany, Newark, N. J.; Vice-Pres., A. McCorkle, West Virginia; Treas., Hayward A. Harvey, East Orange, N. J.; Secy., Lawrence S. Mott, Newark, N. J.

THE VULCAN IRON WORKS CO., Toledo, O., has been entertaining placer miners from the Klondike region, Alaska, and will begin at once to construct new and improved machinery for placer mining. The circumstances and conditions of the various streams differ to such an extent that special machinery must be designed in each case to work profitably.

THE WESTERN ELECTRIC CO., Chicago, Ill., has recently been awarded a contract at Erie, Pa., for furnishing all of the electrical material and constructing a 4-arc lighting plant for the city. There will be 54 miles of pole lines. Estimated cost, $30,000. Among other contracts which the company recently closed is one for lighting the St. Paul, Minn., and the Milwaukee, Wis., post offices, and the construction of a complete lighting plant for the Studebaker Bros.' Building on Michigan Ave., Chicago.

THE GENERAL ELECTRIC CO., Schenectady, N. Y., is reported to have received an order from the Central Underground Ry., of London, England, for 32 electric locomotives of 800 HP., weighing 45 tons each, which is said to be the largest order of its kind ever given.——The company is also reported as preparing plans for an iron foundry, 500 x 130 ft., to be located in Schenectady and to be considering the advisability of removing the branch lamp works, now located in Harrison, N. J., to the former city. About 1,200 men are said to be employed in these works at present, but the force would be increased to 1,800 if the removal occurs.

THE TAUNTON LOCOMOTIVE MFG. CO., Taunton, Mass., has sold 49 snow plows this season, thus breaking its own record and, it claims, so far as is known, the records of competitors.

THE RARIG ENGINEERING CO., Columbus, O., is reported to have begun the manufacture of Corliss engines, having secured the engine business formerly carried on by the Hoffman & Billings Mfg. Co., Milwaukee, Wis.

R. M. QUIGLEY & CO., St. Louis, Mo., railway and general contractors, are reported to have filed a garnishment suit for $195,000 against the Mobile & Ohio R. R. for payment for 127 miles of the Montgomery and Tuskaloosa extension on which they did the work for the Hanover Construction Co., who is in charge of the work.

THE RITER-CONLEY CO., Pittsburg, Pa., is reported to have a contract for two 30,000-bbl. steel oil tanks for the Oxnard Construction Co., New York, to be placed at Hudema, Cal. The tanks are each 85 x 30½ ft., and will cost in all about $25,000. A steel smokestack 133 ft. high will also be shipped with them.——The same company is also reported to be building a 10 x 70-ft. standpipe for the new works of the W. H. Hamilton Glass Co., Charlerol, Pa., and has a contract from the Pennsylvania Tube Co. for the erection of an all-steel addition to its plant, 900 x 104 ft., to cost $50,000, and to be completed in 90 days.

THE LAKE ERIE BOILER WORKS, Buffalo, N. Y., was recently awarded a contract by the Fire Commissioners of that city for a new boiler for the fire-tug "George R. Potter," with the stipulation that the work be done in 20 days, and offering a bonus of $75 a day for each day less than that time. The boiler was completed in such a short period that the company has won a bonus of $900.

THE BERLIN IRON BRIDGE CO., East Berlin, Conn., is erecting a new building for the Benjamin Atha & Illingworth Co., at Harrison, N. J. It is 30 x 30 ft., and about 40 ft. high. At 35 ft. above the ground is a circular trolley track carried by the roof trusses. The frame-work of the building is of steel throughout, and the siding and roofing of corrugated iron. It will be known as the Tower Building.